INFLUENCE OF INTEGRITY AND MORAL INTELLIGENCE ON AUTHENTIC LEADERSHIP AND ORGANISATIONAL CITIZENSHIP BEHAVIOUR

By

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DECLARATION

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ABSTRACT

Over the past decade organisations continue to be confronted with negative employee behaviours. Consequently, researchers and managers of organisations have taken an interest in understanding the factors that contribute to the emergence of positive organisational behaviours like Organisational Citizenship Behaviour (OCB). Thus, the positive impact of OCB on employees, leaders and organisations inspired the emergence of this study. This study was, conducted to gain insight on the determinants of OCB as well as other factors that contribute to these positive employee behaviours.

The aim of this study was to investigate the constructs that play a significant role in the emergence of employee OCB in organisations. These constructs include integrity, moral intelligence and authentic leadership. A theoretical model depicting the manner in which the various constructs relate to each other was developed, and hypotheses were formulated and tested. Data for this study was collected from a sample of military personnel (n = 287). Respondents completed four paper-and-pencil questionnaires, which included the Ethical Integrity Test (EIT), Moral Competency Inventory (MCI), Authentic Leadership Inventory (ALI) and Organisational Citizenship Behaviour Scale (OCBS).

The proposed hypotheses and conceptual model were empirically tested using various statistical methods. The methods included item and reliability analysis, which was conducted on all the measurement scales and satisfactory reliability, was confirmed. The content and structure of the measured constructs were investigated by means of Confirmatory Factor Analysis (CFA), and the results indicated that a good fit was achieved for all the refined measurement models. Thereafter, Structural Equation Modelling (SEM) was used to determine the extent to which the structural model fitted the data obtained from the sample and to test the hypothesised relationships between the constructs.

The results indicated the existence of a significant positive relationship between integrity and moral intelligence, authentic leadership and OCB, as well as moral intelligence and authentic leadership. However, no support was found for a direct positive relationship between Integrity and authentic leadership as well as integrity and OCB.

This study contributed to existing literature on OCB, by providing invaluable insight into the relationships between integrity, moral intelligence, authentic leadership and OCB. Moreover, the current study identified managerial implications that may be considered to enhance the development of employee OCB's in organisations. Furthermore, this study made conclusions based on the research that was conducted and results obtained. Finally, recommendations for future research were suggested.

OPSOMMING

Die afgelope dekade het dit duidelik geword dat organisasies deurlopend gekonfronteer word met negatiewe gedrag van werknemers. Gevolglik het navorsers en diegene in bestuursposisies belangstelling begin toon om die faktore te verstaan wat bydra tot die ontstaan van positiewe organisatoriese gedrag, soos organisatoriese burgerskapgedrag. Die positiewe effek van organisatoriese burgerskapgedrag op werknemers, leiers en organisasies het gevolglik as motivering gedien om hierdie studie te onderneem. Hierdie studie is dus onderneem om insig te verkry oor die determinante van organisatoriese burgerskapgedrag, sowel as ander faktore wat tot die positiewe gedrag van ‘n organisasie se werknemers kan bydra.

Die doel van hierdie studie was om ondersoek in te stel aangaande die faktore wat ‘n beduidende rol speel in die ontstaan van organisatoriese burgerskapgedrag in organisasies. Hierdie bepalende faktore sluit onder andere in: integriteit, morele intelligensie en outentieke leierskap. ‘n Teoretiese model is ontwikkel om die verband tussen hierdie bepalende faktore uit te beeld en gevolglik is hipoteses geformuleer en getoets. Data vir hierdie studie is versamel deur middel van ‘n steekproef van millitêre personeel (n = 287). Die respondente het vier vraelyste voltooi, naamlik ‘n Etiese Integriteitstoets, ‘n Morele Bevoegdheidsvraelys, ‘n Outentieke Leierskapvraelys en ‘n Organisatoriese Burgerskapgedragskaal.

Die hipoteses en die konseptuele model is empiries deur middel van verskeie statistiese metodes getoets. Die metodes sluit in item- en betroubaarheidontledings wat op al die metingskale uitgevoer is en bevredigende betroubaarheid is gevind. Daar is verder ondersoek ingestel na die inhoud en struktuur van die latente veranderlikes deur middel van ‘n Bevestigende Faktorontleding en die resultate dui daarop dat al die metingsmodelle ’n bevredigende passing met die data toon. Daarna is strukturele vergelykingsmodellering gebruik om te bepaal tot watter mate die strukturele model die data pas, en ook om die gepostuleerde verwantskappe tussen die konstrukte te toets.

Die resultate dui op die bestaan van ‘n beduidende, positiewe verwantskap tussen integriteit en morele intelligensie, outentieke leierskap en organisatoriese burgerskapgedrag, sowel as morele intelligensie en outentieke leierskap. Daar is egter geen bewyse gevind dat daar ‘n direkte positiewe verwantskap tussen integriteit en outentieke leierskap, of integriteit en organisatoriese burgerskapgedrag bestaan nie.

Hierdie studie dra by tot die bestaande literatuur oor organisatoriese burgerskapgedrag deur belangrike insigte te verskaf aangaande die verwantskappe tussen integriteit, morele intelligensie, outentieke leierskap en organisatoriese burgerskapgedrag. Boonop identifiseer hierdie studie bestuursimplikasies wat oorweeg kan word om organisatoriese burgerskapgedrag by werknemers te ontwikkel. Gevolgtrekkings is gemaak gebaseer op die resultate wat verkry is. Bykomend is daar ook aanbevelings vir toekomstige navorsing gemaak.

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CHAPTER 1
INTRODUCTION

1.1 STUDY BACKGROUND

Competitive advantage, organisational effectiveness and ultimate organisational success form part of the strategic objectives of most organisations. There are a number of employee behaviours that organisations require to achieve their strategic objectives. Organisational Citizenship Behaviours (OCBs) form part of such desired employee behaviours. The construct of OCB has been researched substantially over the years and it involves voluntary helpful behaviours by employees. Such behaviours are noted as having a major impact on organisational performance and success (Chahal & Mehta, 2011; Chowdhury, 2015; Lu, 2014; Mahembe & Engelbrecht, 2014; Organ, 1988, 1997; Rego & Cuhna, 2008; Turnipseed & Wilson, 2009). Since OCBs contribute to organisational performance and ultimately organisational success, it is of vital importance that leaders in organisations understand OCB antecedents. If leaders can fully understand why employees engage in OCBs, they will be in a position to pave the way for the development and maintenance of these behaviours. The reasons why employees engage in OCBs will thus be explored in this study.

Employees engage in OCBs for a number of reasons including upbringing, individual beliefs, values, social orientation, culture, organisational culture and leaders' actions or inactions (Mahembe & Engelbrecht, 2014). Research on leadership (Avolio & Gardner, 2005; Luthans & Avolio, 2003; Mahembe & Engelbrecht, 2014; Northhouse, 2013; Palanski & Yammrino, 2007, 2009, 2011; Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010; Yukl, 2013) clearly points out the influence that leaders have on their followers, thus it can be deduced that leaders contribute to employees' behaviours. Leaders who place a high value on integrity and morality (i.e. authentic leadership style) are said to influence employees' willingness to engage in positive behaviours like OCB (Avolio & Gardner, 2005; Dineen, Lewicki & Tomlison, 2006; Eisenberg, 2000; Walumbwa et al., 2008). Therefore, the need for moral leaders with integrity should no longer be seen as an added advantage, but as a crucial requirement for all leaders. Thus, the significance of leader integrity and moral behaviour cannot be over emphasised.

Morality is one of the most critical factors in leadership, to such an extent that its absence could turn a potent leadership model (e.g. transformational, authentic, ethical and servant leadership) into a disastrous outcome (Sendjaya, 2005). The importance of morality for leaders cannot be overemphasised as it has been established that it is no longer just a necessity, but also an inherent requirement for effective leadership. A requirement therefore arises, that for leaders to be considered effective, they must not only possess technical competences but also have moral capacity (Sendjaya, 2005).

In addition, Ciulla (1995) maintains that it is insufficient for leaders to be effective but immoral, thus it is highly essential for leaders to demonstrate moral authority as well as effective decision making. Furthermore, Dvir, Eden, Avolio and Shamir (2002) hold the notion that leaders must be morally uplifting. On the other hand, Daniel (2005) suggests that effective leaders operate within a set of core values, which are there to guide their sense of morality, and these values also become the basis for effective leadership. As stated earlier, the composition of moral values and standards in leaders is invaluable when one is required and expected to lead a large group of followers efficiently.

Moral behaviour and personal ethics contribute largely to various aspects of life, they guide one's thoughts, they play an important role in the analysis of everyday interactions with others and the world, they also inform one's decision making process and finally impact on one's actions (Toor & Ofori, 2009). Adapting and engaging in moral conduct is of paramount significance for all members of the organisation. This should be echoed throughout the organisation, commencing with top management and spiralling down to subordinates. The importance of emphasising the top-down approach of this conduct, is informed by the common understanding of creating and upholding an ethical organisational culture that contributes to organisational effectiveness and productivity (Toor & Ofori, 2009). This inference is made owing to the shared understanding that ethics are at the heart of leadership. They are regarded as forming the utmost, if not the main gravitational point of leadership. As a result, ethics are generally viewed as one of the main contributing factors of effective leadership (Ciulla, 1995; Daniel, 2005).

Leaders may be regarded as role models by their subordinates, due to a number of reasons (Bass & Steidlmeier, 1999; Sims & Brinkman, 2002). The reasons may be related to their position, power, influence, mannerism and most importantly, their actual conduct when

interacting with subordinates, peers and those that are senior to them. The behaviour of moral leaders may inspire subordinates to adopt the behaviour of their leaders. In support of this statement Zhu, May and Avolio (2004) found that leaders who are ethical had a positive influence on employees' organisational commitment. In addition, Yukl (2013) states that effective leadership can be measured by looking at the followers' attitude and perceptions towards their leader, the input the leader invests in the quality of the group, the extent to which the performance of the team is enhanced by the leader, the achievement of team and organisational goals, production, sales profit and the leader's career advancement. Based on Yukl's view for measuring effective leadership, data collection for this study was mainly focused on the perceptions of subordinates regarding the influence of their leader's behaviour, and not the self-report by leaders, regarding what they think about their own leadership styles and the influence thereof on their subordinates.

Furthermore, Adair (1968) found that a few qualities make a good leader and they inspire positive organisational outcomes. These qualities include integrity, knowledge, flexibility, mental capacity, courage, decisiveness, dependability, tact, justice, enthusiasm, endurance, unselfishness, loyalty, honesty, good communication skills, helpfulness, motivation, positive influence and good judgment. However, it is pointless for a leader to have the above mentioned qualities, but then to lack the capability to practically and effectively apply these qualities. As a result, Adair (1968) argues that for soldiers to earn the prestigious title of being an officer and a leader, they must first be given appropriate training to be equipped with the necessary knowledge to be effective. Good leadership qualities, appropriate military training as well as appropriate leadership behaviour make up an effective and well-disciplined leader in the military. Authentic leadership is one such leadership style that comprises these qualities.

Authentic leadership is a value and a morally based leadership style that embraces the importance of integrity in leadership. Authentic leaders are leaders with a great sense of self-awareness in terms of their thoughts and actions. These leaders are considered to have an awareness of their own as well as others' values, knowledge, strengths and weaknesses. Authentic leadership contributes in inspiring positive work outcomes like, organisational commitment, work engagement, increased productivity and Organisational Citizenship Behaviour (OCB) (Chowdhury, 2015; Rego, Sousa, Marques, & Cunha, 2012; Walumbwa et al., 2008; Walumbwa et al., 2010).

1.2 ANTECEDENTS OF OCB

Due to the positive nature of employee OCB, organisations have a growing interest in the factors that stimulate the emergence of these behaviours. Employee willingness to engage in OCBs is motivated by the following factors:

- Leadership: A leader's actions or inactions have a huge influence on employee behaviour. Leadership plays the biggest role in influencing and inspiring desirable and at times undesirable behaviours in employees. Morally based leadership styles like servant leadership (Mahembe & Engelbrecht, 2014) and authentic leadership (Chuwdhury, 2015; Walumbwa et al., 2008; Walumbwa et al., 2010) have been found to portray a significantly positive influence on employee OCB. This is based on the fact that leaders enhance team spirit, morale and commitment.

- Perceived supervisory support: Employees that reported their supervisors as supportive, motivating and understanding, reported more engagement in OCB (Chahal & Mehta, 2011; Farahbod, Azadehdel, Rezaei-Dizgah & NezhadiJirdehi, 2012; Rego & Cunha, 2008; Zhang, 2011). Supervisors that support their employees through personal challenges, work related matters and career developmental issues, received boomerang reactions from their employees through the voluntary support that they provide for their colleagues.

- Perceptions of organisational fairness: Employees that perceive their organisation as applying organisational policy, procedures, rules, guidelines, standards, rewards and disciplinary measures in a standard and unbiased manner, are more likely to engage in OCB, since they view organisational systems as transparent, uniform and non-discriminatory (Chahal & Mehta, 2011; Farahbod et al., 2012; Zhang, 2011).

- Identification: Employees that identify well with their job, team, organisational culture, practices and policy, are more likely to engage in OCBs that are directed towards the source with which they identify (Organ 1997; Rego & Cuhna, 2008; Smith, Organ & Near, 1983).

- Role perceptions: Role ambiguity and role conflict have a dire influence on the morale of employees and ultimately their behaviour at work. Employees who were found to have an unclear understanding of their roles, tasks and how they fit into the organisation, showed low morale and this was related negatively to employee willingness to engage in OCB (Chahal & Mehta, 2011).

- Job satisfaction: Employees that are satisfied with their jobs were more motivated and committed to their organisations. Consequently, these employees performed well in their jobs. Satisfied employees reported high willingness to engage in helpful behaviours (Foote & Tang, 2008; Smith et al., 1983; Organ, 1988). Furthermore, employees that are satisfied with their jobs are more committed and are less likely to experience stress at work and to be absent from work.

- Cultural orientation: Employees in organisations that place high value on tradition and structure are said to be less likely to engage in OCB, compared to employees working in less formal organisations (Zhang, Bai, Caza & Wang. 2014).

- Individual traits: Individual traits have been identified as bearing influence on employee willingness to engage in helpful behaviour. Therefore, employees who are motivated, committed, satisfied, show customer care and have a positive work attitude, are more willing to engage in helpful behaviours (Chahal & Mehta, 2011; Rego & Cunha, 2008; Zhang, 2011).

OCB contributes to positive organisational outcomes such as customer satisfaction, productivity, lower employee turnover, employee commitment and cohesion (Chowdhury, 2015; Chun, Shin, Choi & Kim, 2013; Rego et al., 2012; Walumbwa et al., 2008; Williams & Anderson, 1991). In light of the above, it is important to investigate the factors that contribute to the occurrence of employee OCB. Therefore, it is important to ascertain that the antecedents as described above, contribute to the development of OCB, with the specific reference to authentic leadership, which is a morally based leadership style motivated by integrity and morality (see Chapter 2) (Leroy, Palanski & Simons, 2012; Lu, 2014; Walumbwa et al., 2008; Walumbwa et al., 2010). There is an increasing demand for authentic leaders in South Africa and in the South African National Defence Force (SANDF), specifically. This need is mainly based on the positive consequence of OCB for employees and organisations alike.

1.3 RESEARCH INITIATING QUESTION

After the background to the study has been described, the research-initiating question for this study is:

> Why does variance exist in OCB, with specific reference to the role that leader integrity, moral intelligence and authentic leadership play in this regard, not to the exclusion of other factors in the organisation?

1.4 RESEARCH OBJECTIVES

Effective functioning of an organisation is mostly determined by the principles upheld, modelled, enforced and practiced by role players within an organisation, which in this case includes all members of the organisation (leaders as well as subordinates). Due to the fact that leaders have an influence on follower/subordinate behaviour, principles such as integrity and moral intelligence are important in organisations and must therefore be upheld by leaders. In order to determine factors that contribute to employee OCB, a comprehensive systematic assessment of the factors are needed. The following objectives were identified for this study:

- To identify the most prominent antecedents of OCB in organisations;
- To make use of sound theoretical research and logical reasoning to analyse the influence of integrity and moral intelligence on authentic leadership and employee OCB;
- To develop and empirically assess a structural model depicting the relationships between the antecedents and OCB;
- To test the absolute and comparative fit of both the measurement and structural models.
- To evaluate the significance of the hypothesised paths in the structural model;
- To test the validity and reliability of the new integrity test (Ethical Integrity Test);
- To provide detailed information regarding managerial implications concerning the emergence of employee OCB; and
- To provide recommendations for future research.

1.5 OVERVIEW OF THE STUDY

This thesis comprises of five chapters. Chapter 1 outlines the motivation for investigating the relationship between integrity, moral intelligence, authentic leadership and employee OCB. This chapter covers the background of the study, antecedents of OCB, the research initiating question and research objectives.

Chapter 2 provides a comprehensive review of the relevant literature, regarding the main concepts of the study. It also provides the meaning and understanding of the important constructs and it outlines the hypothesised relationships between the constructs. It concludes with the construction of a theoretical structural model, based on the literature that is presented.

Chapter 3 focuses on the research methodology. This chapter provides a comprehensive description of the research design, hypothesised relationships between the constructs, study sample, measuring instruments, method used to collect data as well as the statistical techniques employed for data analysis.

Chapter 4 outlines the research results for this study. The main findings of this study are presented in this chapter, including the data analysis results and the testing of the postulated hypotheses.

Chapter 5 concludes this thesis. This chapter outlines overall conclusions based on the research that was done for the study. It further deliberates on the discussion and interpretation of the research results. It also outlines encountered limitations and provides recommendations for future research. Finally, this chapter concludes by presenting some managerial implications and concluding remarks.

CHAPTER 2
LITERATURE STUDY

2.1 INTRODUCTION

Chapter 1 argued the significance of a morally and ethically based leadership in organisations, by providing an understanding of how authentic leadership, leader integrity and leader moral intelligence positively stimulate employee willingness to engage in OCB. This chapter entails a comprehensive review of literature based on the constructs of this study. Each of the four constructs will be discussed in terms of their meaning and interrelationships. The chapter concludes with the construction of a theoretical structural model, which is based on the hypothesised relationships between the latent variables of leader integrity, leader moral intelligence, authentic leadership and OCB.

2.2 CONCEPTUALISATION OF ORGANISATIONAL CITIZENSHIP BEHAVIOUR (OCB)

The concept of OCB is not new in the field of industrial psychology. OCB is a term that is used to describe positive voluntary behaviour by individuals in an organisation. Such behaviour is not expected by the organisation and it is mostly carried out in the spirit of helping fellow colleagues as well as to advance the interests of the organisation. OCB entails individual behaviours that are beneficial to the organisation but which are not directly recognised by the formal reward system of the organisation (Chahal & Mehta, 2011).

Titrek, Polatcan, Gunes, and Sezen (2014) define OCB as behaviours which individuals exhibit voluntarily with the aim of helping others in the organisation, in addition to the official role of the individual in the organisation. OCB can thus be viewed as an individual's voluntary work beyond the role that was assigned to him or her in the organisation (Turnipseed & Wilson, 2009). These behaviours can be generalised as personal/individual and voluntary acts that are directed at helping fellow employees and consequently advance organisational goals. Thus, OCB may be directed to an individual – OCB-I (selfless helping behaviours aimed at benefiting other individuals like one's colleagues and immediate supervisor) or it may be directed to the organisation as a whole – OCB-O (organisational directed OCB behaviours are mainly aimed at benefiting the organisation and they are focused on advancing the greater good of the

organisation) (Chowdhury, 2015; Chun et al., 2013; Peus, Wesche Streicher, Braun & Frey, 2012; Williams & Anderson, 1991). Below is the brief historical background of the construct of OCB (See Figure 2.1).

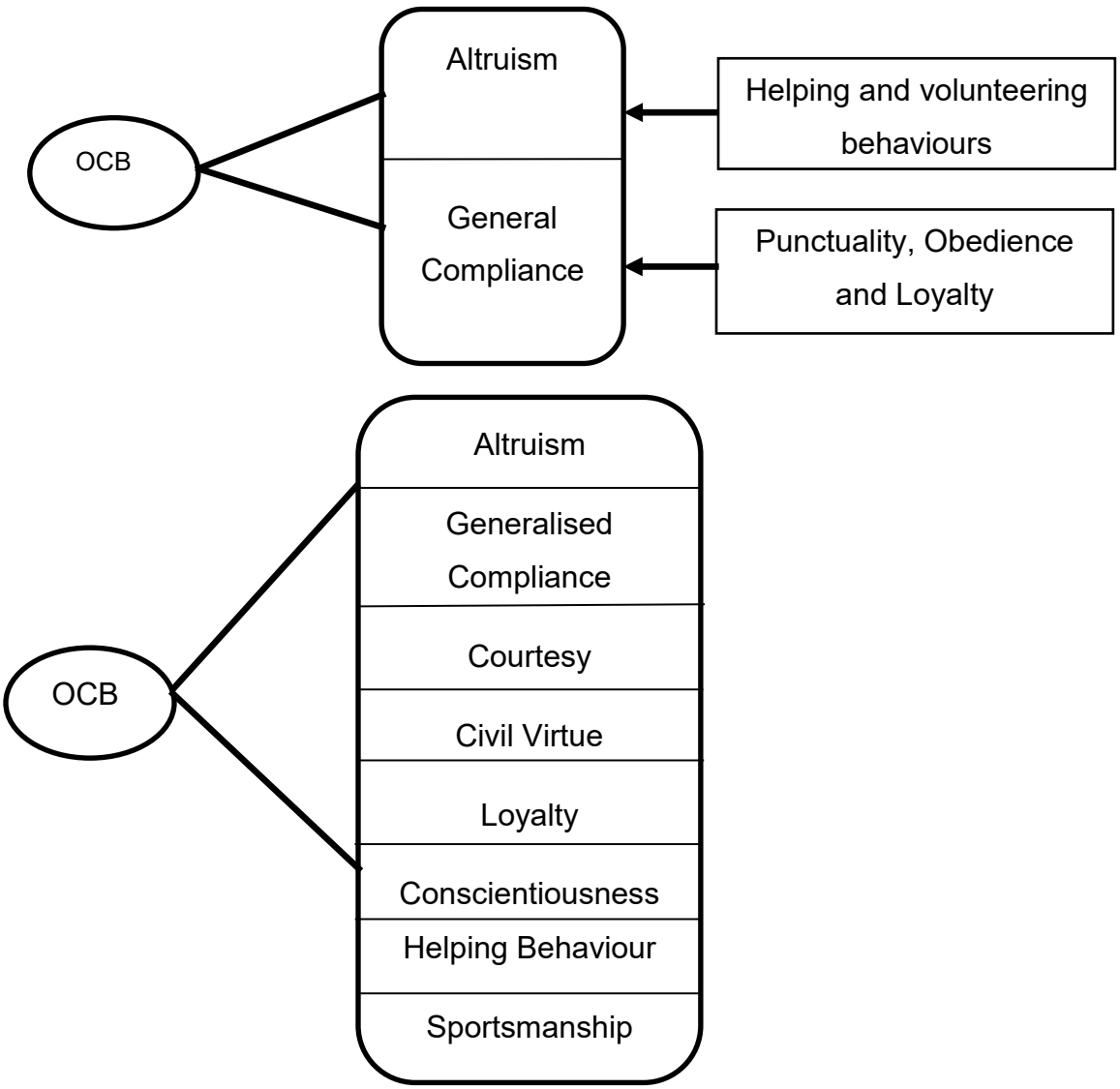

***Figure 2.1*. Organisational Citizenship Behaviour (OCB) Dimensionality**

(Adapted from Chowdhury, 2015, p. 16).

According to the description provided by Chowdhury (2015), OCB was initially conceptualised as encompassing only two dimensions. Firstly altruism, which involves voluntary helpful

behaviour that employees adopt to assist colleagues in work related tasks. This may also involve voluntary orientation of new employees to the work environment. The second dimension is that of generalised compliance, which involves rigid compliance with organisational norms (Smith et al., 1983). For instance, members of the SANDF are generally expected to arrive seven minutes before set time for work. Although this timing arrangement is not written down and non-adherence thereof is not punishable, it is however a norm and it is expected of members of the SANDF.

In addition to the two dimensions identified by Smith et al. (1983), further studies on OCB (Chahal & Mehta, 2011; Hannam & Jimmieson, 2002; Markoczy & Xin, 2004; Podsakoff, Mackenzie, Moorman & Fetter, 1990) led to the inclusion of other dimensions for the OCB construct: helping behaviour – these behaviours involve helping others at work; loyalty – this encompasses the concept of organisational and co-worker support and commitment; additional dimensions include courtesy, conscientiousness, sportsmanship and civic virtue (Chowdhury, 2015; Smith et al., 1983). Chowdhury's (2015) model captures the previous and current analysis of the OCB construct and provides an elaborate picture of the dimensions of OCB (Chowdhury, 2015). Thus, this model is regarded as a reflection of the image of the concept of OCB.

After extensive research over the years regarding the meaning of OCB and its descriptive behaviours, Organ (1988) defined the construct of OCB as encompassing of five major behaviours: altruism, sportsmanship, conscientiousness, courtesy and civil virtue. Following Organ's Work on OCB, numerous studies were conducted which also indicated congruency with the five OCB behaviours proposed by Organ (1988). Below are the descriptions for each OCB behaviour:

- Altruism – refers to voluntary acts that involve providing help to colleagues or other members of the organisation with the aim of solving organisation related problems.

- Sportsmanship – involves tolerating the unavoidable inconveniences and irritations that may arise in the organisation without complaining and reporting grievances.

- Courtesy – describes behaviours that are focused on preventing problems and facilitating serenity by being mindful of how one's action affects other people; resolving and avoiding conflict.

- Conscientiousness – refers to employee actions that go beyond minimal requirements in carrying out tasks. Employees adapting these actions are known to go an extra mile in the fulfilment of organisational tasks.

- Civic virtue – describes as employee responsible participation in the political and administrative processes of the organisation. This may be done by providing inputs, giving feedback and participating in discussions or general involvement in organisational activities to assist, advance and enable the realisation of organisational objectives.

In addition to the description provided by Chowdhury (2015), OCB may be viewed as evidence of the existence of pro-social organisational behaviours among employees (Turnipseed & Wilson, 2009). OCB involves behaviours that enhance organisational trust, performance, justice, integrity and generalised compliance in the organisation. Since these behaviours are neither expected nor rewarded by the organisation/employer, they are thus totally voluntary, and omission thereof is not punishable.

Lu (2014) is of the opinion that although these behaviours are not expected nor rewarded, they are however necessary for the advancement of the organisation. It is after all these behaviours that lead to tasks being well understood by other employees, carried out correctly on time and contribute positively to the organisation's effectiveness. The military is a unique environment that requires full dedication, commitment and engagement from all its members. One cannot imagine a military whose members lack trust, commitment, helpfulness, 'esprit de corps' and mutuality, thus one may say OCB is an implicit requirement in most work organisations, but especially in the military.

Based on all the definitions of OCB as provided above, a few deductions can be made concerning OCB: (1) it entails voluntary and intentional helpful behaviours by employees, (2) it is directed at others or the organisation, (3) behaviours are not compulsory, (4) behaviours are not expected by the organisation, (5) commission or omission of the acts is neither rewarded nor punished by the organisation, (6) they contribute to effective individual and organisational functioning, (7) employees that engage in these acts value reciprocal exchange, (8) morally based leadership influence their existence, and (9) these acts lead to positive organisational outcomes.

This study focused on examining the construct of OCB as positive employee behaviours. The five OCB behaviours as proposed by Organ (1988) are also adopted in this study. Thus, for the purpose of this study, OCB is defined as “behaviour[s] of a discretionary nature that are not part of employees’ formal requirements, but nevertheless promote the effective functioning of the organization” (Organ, 1988 p. 4).

2.3 CONCEPTUALISATION OF AUTHENTIC LEADERSHIP

In the field of Organisational Psychology, a large number of researchers (including: Avolio, Bass, Burns, Ciulla, Engelbrecht, Rost, Sergiovanni and Yukl) continue to show an interest in studying and understanding the underlying behaviours accompanying good leadership. The focus on leadership theories has grown and escalated in trying to understand the concept of leadership to influence leaders in adapting certain leadership styles, which are reported as more uplifting, ethical, moral, desirable and most effective (Engelbrecht, Heine & Mahembe, 2015; Hannah, Avolio & Walambwa, 2011; Walumbwa et al., 2008).

The interest for teaching ethical behaviour to leaders is somewhat influenced by the growing reports of morally disappointing leaders (Ciulla, 1995). Morally disappointing leadership is visible in most, if not all spheres of life: work organisations (where we see unethical and dishonest leaders that engage in and promote organisational deviations); business fields encompassing managers that embezzle company money; religious institutions where ministers behave immorally. In South Africa, specifically there are numerous reports in daily news and social media on cases of rape, murder, embezzlement of funds (including church money) by leaders; in addition political leaders continuously fail to deliver on their election promises.

The increase in leadership that is morally disappointing is a clear indication of a growing need for leaders with integrity, high moral values, honesty, and an inflated sense of internal and individualised code of ethics. Ethical, servant, transformational and authentic leadership styles are some of the leadership styles that comprise elements of integrity, morality, honesty and a good code of ethics (Yukl, 2013). In essence, these are the leadership styles that leaders need to adopt to be considered effective and morally uplifting. For the purpose of this study, the focus will be on authentic leadership.

Various authors in the field of leadership define authentic leadership in different, yet similar ways. This may be attributed to the notion that this construct is still emerging in its field and it is also in its early stages of conceptual development (Walumbwa et al., 2008). Heidegger and Rogers (as cited in Walumbwa et al., 2008) maintain that although a consensus may be reached regarding the youthfulness of the theoretical concept of authentic leadership, the concept of authenticity has been well recognised and acknowledged in the fields of philosophy and psychology. In addition, authentic leadership is deeply rooted and somewhat related to the theoretical work of ethical and transformational leadership (Walumbwa et al., 2008).

Looking at Bass's (1985) work on transformational leadership, it could be deducted that the concept of authentic leadership is closely related to some behavioural dimensions of transformational leadership. These include inspiration, charisma, individualised consideration and intellectual stimulation. According to Northouse (2013) authentic leaders have a greater sense of self-awareness and self-regulated positive behaviour which foster positive self-development for both the leader and the followers. Shamir and Eilam (2005) are of the opinion that authentic leaders are people who exhibit genuine leadership from convictions and they are sincere. Shamir and Eilam (2005) further emphasises that in authentic leadership, the role of the leader is a central component of his or her self-concept. These leaders have achieved a higher level of self-resolution or self-concept clarity, their goals are self-concordant and their behaviour is self-expressive. According to Gardner, Avolio, Luthans, May and Walumbwa (2005, p. 347) "authentic behaviour refers to actions that are guided by the leader's true self as reflected by the core values, beliefs, thoughts and feelings as opposed to environmental contingencies of pressures from others."

Finally, Walumbwa et al. (2008, p. 94) define authentic leadership as a "Pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information and relational transparency on the part of the leaders working with followers, fostering positive self-development." Different authors and researchers have different views on defining the construct of authentic leadership. There is however an underlying agreement that authentic leaders are leaders who are true to themselves and they are aware of their own and others' moral values, strength and resilience. In addition, they have high moral characters and they possess positive psychological capacities.

Research on authentic leadership (Cottrill, Lopez, & Hoffman, 2014; Gardner et al., 2005; Hannah et al., 2011; Onorato & Zhu, 2014; Walumbwa et al., 2008; Walumbwa et al., 2010) indicate a great consensus in that authentic leadership is a multidimensional construct that comprises of four dimensions, which include self-awareness, relational transparency, internalised moral perspective and balanced processing.

- Self-Awareness - refers to deep knowledge about oneself, with reference to one's strengths and weaknesses, capability, skills, values, preferences and leadership; this also involves awareness of how others view your leadership style and their perception of you as a leader.

- Relational Transparency - involves making open disclosures by expressing honest feelings and thoughts about oneself during interactions with others, while being mindful of own inappropriate, unwelcome and unbecoming behaviour.

- Internalised Moral Perspective - entails the demonstration of the principles of integrity and using one's values and well evaluated external standards to guide behaviour.

- Balanced Processing – describes one's ability to remain objective when considering various aspects of a matter, prior to making decisions.

Research on authentic leadership suggests that authentic leadership stems from transformational and ethical leadership (Walumbwa et al., 2008), however for one to be considered authentic, one must possess all four dimensions of authentic leadership as presented above.

Although it is agreed that there are similarities between these leadership concepts (authentic, transformational and ethical leadership) it is however clear that authentic leaders have a different view regarding the manner in which they inspire their followers' believes and values (Walumbwa et al., 2010). Authentic leaders do not believe in enticing followers through resources or any form of tangible-extrinsic rewards. However, these leaders are more focused on internal employee inspiration. Thus, they target the inner being of their followers, by positively influencing their follower's thoughts, decisions and actions. As a result, authentic leaders are said to inspire their followers by showing their own genuine morality, dedication, and

openness (Clapp-Smith, Vogelgesang & Avey, 2009; Ilies, Morgeson, & Nahrgang, 2005; Walumbwa et al., 2008; Walumbwa et al., 2010).

The descriptions above state that authentic leaders are leaders who are true to themselves and they have a deep understanding about themselves, they are open in their thoughts and decisions and they have a high regard for morals, while at the same time they maintain objectivity in their actions. For the purpose of this study, the definition of authentic leadership as provided by Walumbwa et al. (2008) applies. Authentic leadership is a "pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information and relational transparency on the part of the leaders working with followers, fostering positive self-development" (Walumbwa et al., 2008, p. 94).

2.4 CONCEPTUALISATION OF MORAL INTELLIGENCE

The concept of moral intelligence is reasonably young in both the field of morality and intelligence. To clearly explain the concept of moral intelligence as a whole, the researcher will first explain what morality is and thereafter a discussion on intelligence will follow.

Moral intelligence is relatively new compared to the other types of morality (moral reasoning, moral judgement and moral development) (Rahim, 2011). It includes the way we process our thoughts, experience our feelings and take action (Clarken, 2009). According to Rahim (2011) morality is derived from the Latin word '*morilitas*', and generally refers to rules and standards that are practiced by a particular society. Therefore, morality is applicable to a specific society and it is concerned with the practice of defining right and wrong. It is important to note that morality is an internal abstract concept that exists within an individual, hence it is also regarded as a code of conduct that is put forward by individuals for their own behaviour. Furthermore, morality involves the ability to distinguish right from wrong, as well as the practice of doing good and living according to acceptable standards of society (Kohlberg, 1981). Moral leaders contribute in uplifting the reputation of their organisations. This is based on the belief that leaders and managers are the custodians of their organisations, thus the moral principles and ethical values they hold, reflect the organisations that they work for (Beheshtifar, Esmaeli & Moghadam, 2011).

Clarity arises from the description provided above that although morality may be shared among a society, it must be emphasized that it remains internal to an individual. It is without doubt that morality is one of the oldest concepts in psychology; it received substantial attention in the works of Piaget, Kohlberg and Colby with specific reference to the theory of moral reasoning and moral development (Gilligan, 1982). Moral development is the process through which children develop appropriate attitudes and behaviours towards others in society, based on social and cultural norms as well as rules and laws (Rahim, 2011). In addition to Rahim's definition of moral development, Theis and Travers (2001) are of the opinion that moral development refers to the emergence of universal moral standards in children that lead to the condemnation of behaviours such as robbery, murder and rape.

One cannot discuss morality and exclude the work of Jean Piaget and Kohlberg, as that will be a discussion without a solid foundation. Jean Piaget looked at moral development as composing of a two-stage process, while Kohlberg's theory of moral development outlined six stages composing of three different levels, namely pre-conventional morality, conventional morality and post-conventional morality. According to Kohlberg (1981) people who reason in the pre-conventional level, judge the morality of an action by its direct consequences. People who judge the morality of their actions by comparing them to societal views and expectations are regarded as reasoning in the conventional level. The post-conventional morality level is also known as the principle level. Individuals who reason on this level, consider themselves before they consider others, when taking an action or making decisions. Therefore, they realise and acknowledge that they act as separate entities from the society and they start believing that their own perspectives should be viewed first before those of the community or the society (Heibrum & Georges, 1990; Kohlberg, 1981).

Looking at these definitions and the manner in which they are explained, it is clear that the underlying meaning of these constructs (morality, moral development and moral reasoning) has to do with one's ability to differentiate between what is right and what is wrong in order to make an informed decision based on fairness, while considering the effect of the decision on oneself and on the society. For leaders to be regarded as moral, they ought to base their thoughts, words and actions on what is right, not only for themselves, but also for their organisation. It can thus be concluded that morality in leadership is a vital requirement (Sendjaya, 2005).

Intelligence on the other hand, is a construct that has continuously received a substantial amount of attention, especially concerning the other forms of intelligence: emotional, cognitive as well as social intelligence. The construct of intelligence is mostly regarded as related to cognitive ability, which addresses thinking, learning, memorising and reasoning (Clarken, 2009; Beheshtifar et at., 2011). People's ability to function effectively in various spheres of their lives, is considered when explaining intelligence. This is based on the idea that people acquire and retain various skills and knowledge throughout their lives, which they later use to effectively and efficiently manage their lives. Thus, intelligence may be regarded as the ability to utilise one's thoughts in order to function effectively in the world (Gedney, 1999; Rahimi, 2011).

It must be noted that it is not the focus of this study to dwell on the theory of morality and intelligence, but rather to introduce these terms as a means to highlight the theoretical background for the construct of moral intelligence.

As stated earlier, moral intelligence is a somewhat newer form of intelligence which received its growth and recognition through the work of Lennick and Kiel. Unlike intelligence which mainly addresses the cognitive aspects of thinking, reasoning, and learning, moral intelligence looks more into human values and conduct, as guided by the societal value system. Borba (2001) is of the opinion that moral intelligence is the capacity to distinguish right from wrong, to have strong ethical convictions and to act on them to behave in the correct and honourable way. According to Beheshtifar et al. (2011) moral intelligence refers to the ability to distinguish good from evil by utilising universal principles as the main guidance. Furthermore, Baheshtifar et al. (2011) is of the opinion that this type of intelligence (moral intelligence) is the main driver that directs our other forms of intelligence to do something worthwhile. Leaders that have a high regard for moral intelligence, are regarded as prominent custodians of their organisations. As such, leaders and employees that uphold moral intelligence, contribute to positive organisational outcomes, like overall organisational effectiveness (Clarken, 2009; Beheshtifar et al., 2011).

During the research of moral intelligence in schools, Borba (2001) identified seven virtues that are necessary for the development of moral intelligence: Empathy, Conscience, Self-control, Respect, Kindness, Tolerance and Fairness. In addition to the seven virtues by Borba (2001), Rahimi (2011) is of the opinion that moral beings exhibit the following traits: inhibitory control, empathy, consistency, fairness, responsibility, cooperation and logic. However, Lennick and Kiel

(2005, 2006, 2008, 2011) are of the opinion that moral intelligence consists of four competencies: integrity, forgiveness, responsibility and compassion.

- Integrity: It is the ability to remain consistent in one's own beliefs and actions. People with integrity are regarded as honest, truthful, keeping promises, upholding good values and principles. These are people that do the right thing(s) even when no one is watching (Clarken, 2009).

- Forgiveness: Humans are imperfect beings, therefore it is important to understand and accept the possibility of error. This involves tolerating others and their mistakes and also letting go of own mistakes (Manallack, 2006).

- Responsibility: This is described by Lennick and Kiel (2005, 2008, 2011) as comprising of three competencies: taking personal responsibility, admitting mistakes and failures, and embracing responsibility for serving others.

- Compassion: This component is about actively caring about others. Compassion has a two-way effect, as compassionate people generally receive back the kindness and care they show to others, when they are confronted with trouble (Manallack, 2006).

The four competencies of moral intelligence as suggested by Lennick and Kiel (2005, 2006, 2008, 2011) correspond to the seven virtues as proposed by Borba (2001), as well as some traits of integrity as described by Rahim (2011). Integrity addresses the concepts of conscience and fairness as proposed by Borba (2001) and it addresses consistency and fairness as proposed by Rahimi (2011). As mentioned above, integrity is a term used to describe harmony and consistency between one's words and actions with the consideration that consistency is based on moral principles. Lennick and Kiel (2005, 2011), as well as Rahimi (2011) are of the opinion that a person with a high level of moral intelligence, shows a high level of responsibility. Responsibility is regarded as owning up to one's mistakes – that is being accountable for own actions and inactions regardless of the outcome. Thus, the construct of responsibility addresses Borba's (2001) conceptualisation of self-control and respect. In addition, Lennick and Kiel (2005, 2006, 2008, 2011) are of the opinion that compassion, which describes the act of genuinely caring about others is also a competency of moral intelligence. Thus, the term compassion may explain the concepts of empathy (Rahim, 2011; Borba, 2001) and kindness (Borba, 2001).

Finally, forgiveness entails letting go of own and others mistakes without expectations. Lennick and Kiel's competency of forgiveness is linked to the virtue of tolerance as proposed by Borba (2001). This is based on the deduction that forgiveness entails tolerating others' mistakes.

A deduction is therefore made that moral intelligence touches on the soft skills of human behaviour and is experienced internally but depicted externally, thus visible through interaction with others. As such, it is a construct that not only highlights the importance of distinguishing right from wrong, but also addresses the significance of conducting oneself in a good, honourable and ethical manner, while upholding high moral principles and values (Borba, 2001; Lennick & Kiel, 2005, 2006, 2011; Rahimi, 2011).

It is clear from the discussion above that moral intelligence could be an important competency for ethical and effective leadership. For the purpose of this study, moral intelligence is defined as the mental capacity to determine how universal human principles should be applied to our values, goals and actions (Lennick & Kiel, 2005).

2.5 CONCEPTUALISATION OF INTEGRITY

Integrity is considered a fundamental element for predicting positive behaviours at work and other spheres of life, including family, friendships and romantic relationships. In support of this statement, research indicates that integrity has proved to be a predictor of both work performance and counter-productive work behaviour (Ones, Viswesvaran, & Schmidt, 1993). Integrity has also been seen as a determinant of trust in leadership (Engelbrecht et al., 2015; Killinger, 2010; Mayer, Davis & Schoorman, 1995), moreover it has been identified as a fundamental element of effective leadership (Moorman, Darnold, Priesemuth & Dunn, 2012). Bauman (2013) is of the opinion that integrity is a core moral concept that supports leadership theories that are based on ethics and morality. A large pool of evidence through research continues to prove and demonstrate the importance of integrity in various spheres of life. However, a gap still exists in the appropriate and generally acceptable definition of integrity (Bauman, 2013; Palanski & Yammarino, 2007).

According to Moorman et al. (2012) there are two general approaches that are used to describe integrity: integrity as consistency and integrity as moral behaviour. Worden (2003) on the other hand described integrity according to its root and originality, by looking at the Latin term

'*integritas*', which conveys a sense of wholeness, coherence, righteousness or purity. According to Worden the construct of integrity has a narrow (only focused on consistent behaviour) and broad (encompassing both the consistent behaviour and adherence to moral values) sense. Firstly, the approach of defining integrity as consistency entails the perception that values are applied consistently, regardless of whether they are moral or not. Thus, this approach entails the act of aligning one's words and actions – practising what one preached – in a way that one had proposed to do it.

Killinger's definition of integrity provides a good explanation of what integrity in terms of consistency means. Killinger (2010) is of the opinion that "integrity is a personal choice, an uncompromising and predictably consistent commitment to honour moral, ethical, spiritual and artistic values and principles" (p. 12). In addition, Killinger (2010) further describes integrity as the construct that describes wholeness the best. Furthermore, it is emphasised that people with integrity are in-sync with their thoughts, words and actions, and that they are consistent, loyal, reliable, predictable, trustworthy, impartial, and socially conscious and that they have self-discipline (Koehn, 2005).

Palanski and Yammarino (2007) define leader integrity as meaning "consistency of an acting entity's words and actions" (p. 178). Simons (2002) also based his definition of integrity on consistency where he refers to leader behavioural integrity (BI). According to Simons (2002) leader BI includes the alignment between the leader's words and his deeds. In addition, Simons (2002) is of the opinion that integrity guides the alignment of one's behaviour through one's moral principles. Looking at these definitions of integrity it is clear that these authors looked at integrity from a wholeness perspective. They believe that a person with integrity aligns his thoughts, words and actions.

The problem with this definition of integrity is that it ignores the concern and existence of others and the society in general; this results in limiting one's reasoning and judgement mainly to the individual self. Most importantly this approach is too narrow. It only focuses on consistency, rendering the construct of integrity as mainly based on consistent behaviour, which in turn permits those that act consistent but immoral, to be considered to have integrity (Moorman et al., 2012). Adopting this stance in describing integrity robs one of the true meaning and understanding of the actual concept.

In addition, it must be highlighted that not all consistent people have integrity, as integrity addresses aspects of morality. This means that one may be consistent but not necessarily adhere to morally acceptable standards of behaviour. Thus, consistent people are not necessarily people of integrity, hence Simons (1999) is of the opinion that behavioural integrity cannot be used to describe the general or core concept of integrity, but it may be acknowledged to play a role in contributing to the general construct. Therefore, it is necessary to look at the second approach to describe integrity.

The second approach is based on integrity as moral behaviour, which entails the consideration and application of moral values as a foundation of integrity. Therefore, those that uphold this approach are considered as people with integrity, mainly based on the moral values that they uphold and not on the consistency of their words and deeds. This approach looks at the perspective and component of morality, by focusing on the adherence, display and frequency of generally acceptable and expected moral behaviour. However, it must be emphasised that adhering to the law, set codes of conduct and rules, does not equal integrity and does not necessarily imply that one is a person of integrity.

Therefore, this approach to define integrity focuses more on compliance with moral standards, norms, moral values, the law, set rules and the moral code of conduct. However, it does not ignore the role of consistency, as consistency plays a significant role in morality and it is embedded in the construct of morality (Bauman, 2013; Moorman et al., 2012; Six, De Bakker & Hubberts, 2007). Barnard, Schurink and De Beer (2008) argued that individuals placing a high value on integrity; live according to internal sets of moral principles, which may be viewed as universally acceptable. Alternatively, Barnard et al. (2008) is of the opinion that people who are mainly focused on satisfying their own personal interests at the cost of others, with little or no regard for integrity related values, have a poor sense of integrity.

It is clear that there are numerous definitions of the construct integrity. However, evidence in literature indicates consensus that integrity is composed of five fundamental values: trust, honesty, respect, responsibility and fairness. In an attempt to address the gap in literature Palanski and Yammarino (2007) did extensive research on the construct of integrity. The purpose of their research was to address the definition of integrity and to propose a specific manner for conceptualising integrity.

In their research, a conclusion was reached that integrity is composed of five categories: integrity as wholeness, integrity as consistency of words and actions, integrity as consistency in adversity, integrity as being true to oneself, and integrity as moral or ethical behaviour.

- Integrity as wholeness is an inclusive term used to provide a full description of the overall person by looking at consistency in one's behaviour, thoughts, emotions and actions in different situations and at different times (Palanski & Yammarino, 2007).

- Integrity as moral or ethical behaviour: This dimension means that people with integrity are regarded as highly ethical and moral beings, conducting themselves in a moral and socially acceptable manner (Palanski & Yammarino, 2007).

- Integrity as consistency of words and actions means one's words must be in line with one's actions. There should be no deviation from the one to the other. Therefore, one is expected to practice what one preaches across time and situations (Palanski & Yammarino, 2007; Simons, 2002; Worden, 2003).

- Integrity as consistency in adversity entails being true to oneself when faced with the most challenging and difficult situations. In addition, this involves the ability to resist temptation and to succumb to it (Worden, 2003).

- Finally, integrity as being true to oneself, refers to the ability to remain loyal to one's beliefs, values and most importantly, to one's conscience. This dimension is closely linked to authenticity, where one takes ownership of personal experiences and behaves accordingly (Palanski & Yammarino, 2007).

It is evident from the discussions above that there are numerous, yet different understandings of the concept of integrity. However, it must be emphasised that for the purpose of this study integrity is defined as acting in accordance with universally accepted ethical values, principles and norms (Engelbrecht, as cited in Du Toit, 2015).

2.6 THE RELATIONSHIP BETWEEN AUTHENTIC LEADERSHIP AND OCB

OCB involves voluntary helpful behaviour adopted by an employee or employees of a particular organisation, with the intention of advancing the objectives of the organisation and to assist fellow employees. OCB has a positive bearing on promoting positive voluntary behaviours such as pro-social behaviour, integrity, justice and trust. These behaviours consequently have an invaluable contribution towards promoting positive behaviour as well as the advancement of an organisation (Podsakoff, McKenzie, Pain, & Bachrach, 2000).

Extensive research has been done with the intention of determining the antecedents and consequences of OCB. Evidence has pointed to leadership behaviour, individual differences, situational demands, organisational tasks and work characteristics (Podsakoff et al., 2000). For the purpose of this study, the focus will be on leadership behaviour as an antecedent of OCB.

As role models and representatives of the organisation, leaders (especially supervisors and first-line managers) are considered example setters for the whole organisation, since employees judge the organisation according to the behaviour of its leaders. An organisation composed of laissez-faire leaders, creates room for dysfunctional behaviour among employees. On the contrary, an organisation composed of value-based leaders, encourages positive work outcomes such as engagement, commitment, trust and helpful behaviour (Engelbrecht et al., 2015). Certain leadership styles (authentic, ethical, transformational, and servant leadership) advocate for more positive work outcomes, helpful and effective behaviour, as well as work team effectiveness, OCB and related helpful behaviours, which contribute positively to overall organisational effectiveness (Mahembe & Engelbrecht, 2014; Wong & Cummings, 2009).

Authentic leaders are known to encourage pro-social organisational behaviours among their followers (Avolio & Gardner, 2005). Authentic leaders have high moral character. These leaders are known to promote positive psychological capacity and positive self-development for themselves, their associates as well as their subordinates. Most authentic leaders have a good sense of self-awareness and self-regulated positive behaviour; they are known to be genuine leaders (Northhouse, 2013; Walumbwa et al., 2008; Yukl, 2013). Therefore, authentic leaders are seen as leaders who are not only concerned with the advancement of the self, but also the organisation and its people, hence their helpful behaviour (Clapp-Smith et al., 2009).

Authentic leadership may positively affect employee attitudes and behaviour, as well as work outcomes such as job satisfaction, job commitment, trust, team cooperation, leader-member exchange, team-member exchange, organisational commitment, creativity, engagement, productivity, increased sales, customer satisfaction, reduced turnover and OCB (Chowdhury, 2015; Chun et al., 2013; Rego et al., 2012; Walumbwa et al., 2008; Walumbwa et al., 2010; Williams & Anderson, 1991). Employees that regard their leader as committed, honest, selfless, just and moral, are more likely to adopt and exhibit pro-social organisational behaviour (Chowdhury, 2015; Chun et al., 2013). Authentic leaders are known to promote a just and open relationship among their followers. They encourage an atmosphere of sharing and helpfulness. As a result, employees that perceive their leaders as authentic are more likely to develop trust for their leader, commitment to the organisation and consequently display high levels of OCB (Rego et al., 2012; Walumbwa et al., 2008; Wong & Cummings, 2009).

Leroy et al. (2012) found that authentic leadership was related to follower affective organizational commitment as mediated by leader behavioural integrity. Furthermore, it was found that authentic leadership had a positive effect on work group performance and employee helpful behaviours. A study by Kiyani, Saher, Saleem and Iqbal (2013) found that the mediating role of authentic leadership showed positive correlations with leader-emotional intelligence, employee job performance and OCB. In addition, Valsania, León, Alonso and Cantisano (2012) conducted research on the effect of authentic leadership on employee OCB. This research was mainly focused on how the four components of authentic leadership relate to the dimensions of OCB-I and OCB-O.

Results of the study by Valsania et al. (2012) revealed that two of the four dimensions of authentic leadership (internalised moral perspective and relational transparency) were positively related to employee OCB. Furthermore, they found authentic leadership as a better predictor of employee's willingness to engage in OCB, when these behaviours were directed towards the organisation, versus towards individuals. Other research on authentic leadership and the dimensions of OCB (OCB-I and OCB-O) by Peus et al. (2012), found that authentic leaders had a positive effect on employee OCB, with specific reference to the link between an authentic leader's relational transparency and employee willingness to engage in OCB-I. Employee OCB-O, on the other hand was found to be positively affected by the authentic leader's moral perspective and relational transparency.

It can thus be hypothesized that authentic leadership has a positive influence on employee OCB.

2.7 THE RELATIONSHIP BETWEEN INTEGRITY AND OCB

Employee OCB can be described as unexpected and unrewarded voluntary acts by employee(s) that positively contribute to organisational effectiveness and it enhances the social, work and organisational climate (Organ, 1988; 1997). Authentic leaders are regarded as people with integrity, therefore they are known to promote positive self-development of the leader, associates as well as followers; positive ethical climate; and high moral character. This impacts positively on the advancement and the effective operation of the organisation. Therefore authentic leaders firmly qualify to be regarded as leaders with integrity (Walumbwa et al., 2008).

The existence and value of integrity in leaders are emphasized by these elements of authentic leadership which consequently leads to desirable acts like employee pro-social behaviour, enhanced trust, advancement of the organisation and voluntary helpful behaviour. Such positive behaviours are strongly associated with the construct of OCB, thus highlighting the link between leader integrity and employee OCB (Avolio & Gardner, 2005; Dineen et al., 2006; Eisenberg, 2000).

A number of researchers (Avolio & Gardner, 2005; Mahembe & Engelbrecht, 2014; Walumbwa et al., 2008) found a link between certain leadership styles (ethical leadership, authentic leadership, servant leadership and transformational leadership) and integrity. The link between morally based leadership styles and integrity has grown to include the significant influence of leader integrity on employee OCB. Dineen et al. (2006) found that leaders that are apparently rated high on behavioural integrity, were regarded as inspirational. As a result, these leaders motivated their employees' willingness to engage in OCB. Avolio, Gardner, Walumbwa, Luthens, and May (2004) also found that authentic leadership has the potential to create a transparent and just environment that is conducive to the development of OCB at work.

Zhang et al. (2014) developed a model to demonstrate the link between leader-integrity and employee OCB. The research conducted by Zhang et al. (2014), was mainly focused on the Chinese context. Upon conceptualising their model Zhang et al. (2014) found that leaders who are rated high on integrity, will foster a traditional employee's willingness to engage in OCB.

Furthermore, employee willingness to engage in acts of OCB was mediated by leader effectiveness. Therefore, according to this study certain preconditions must be present for employees to engage in OCB. For employees to engage in OCB the leader must be perceived as effective and rated high on integrity, and in addition the employees must also have a high regard for traditional Chinese values.

Since leaders are considered agents and representatives of their work organisations, employees look up to them and at the most they also model their behaviour, making the leader's behaviour an implicit conduct expected by the organisation. A leader that upholds high moral values and behaves in a righteous manner has the ability to inspire followers to behave in a similar manner, hence the behaviour emulation by the followers (Avolio et al., 2004; Dineen et al., 2006).

Followers regard such ethical and moral leaders as example setters, thus making them (followers) more willing to engage in positive behaviour that benefits both the organisation and work relationships. Therefore, when a leader sets a tone for positive work behaviour, such as sharing of work resources, helpfulness and open communication, this implied behaviour by the leader, spirals down to employees and it inspires the confidence of sharing and helping one another, which consequently leads to employee OCB (Dineen et al., 2006). When looking at leader behavioural integrity Tomlinson, Lewicki and Ash (2014) found that employee OCBs like helping, civic virtue and sportsmanship occur mainly when leaders display high behavioural integrity and promote values that are congruent with those of their followers. Furthermore, Tomlinson et al. (2014) found that when the value congruence of both the supervisor and employee is low, the behavioural integrity of the supervisor does not predict employee OCBs.

Because employees value positive outcomes, the theory of social exchange and justice are applicable in this context. These theories emphasise the importance of reciprocal benefits and fairness for all concerned parties. The same may be concluded for the leader-follower relationship. Employees that perceive the relationship they have with their leader as positive, will be more willing to reciprocate with positive work behaviours (Blau, 1964). In addition, Greenberg (1990) argues that when followers perceive their leader's treatment as unfair, they (followers) may judge the leader's unfairness as a distortion of the input–output relationship and thus they reduce their efforts.

It may therefore be concluded that followers who perceive their leader as a person who rates high on behavioural integrity, are more likely to enhance their performance at work and engage in positive organisational behaviours like OCB (Meyer, Stanley, Herskovitch & Topolnytsky, 2002). Simons, Leroy, Collewaert and Masschelei (2015) also found that leader behavioural integrity was strongly related to follower performance. In the research conducted by Simon et al. (2015) follower performance included that the followers work as per job specifications and OCBs. As previously stated, effective leaders are leaders who rate high on moral and ethical values, therefore these leaders need not to entice followers with extrinsic rewards. However, they elicit desired follower behaviour by being genuine and serving as role models. Therefore, the personal characteristics displayed by leaders with integrity, result in positive organisational outcomes fulfilled by employees (Bass & Steidlmeier, 1999). Considering the findings above, it may be concluded that a leader who rate high on integrity, has a strong potential to positively influence employees to engage in OCB.

It can thus be hypothesized that leader integrity has a positive influence on employee OCB.

2.8 THE RELATIONSHIP BETWEEN MORAL INTELLIGENCE AND AUTHENTIC LEADERSHIP

Morally intelligent leaders are guided by strong principles and uphold good values and ethics. Such leaders have a high regard for ethical principles and morals, to the extent that they are willing to put their personal needs and beliefs aside and do that which is deemed right. This type of behaviour is noticeable in their words as well as in their actions. Due to their strong influence and inspiration morally, intelligent leaders have the ability to transcend their behaviour to the subordinates (Lennick & Kiel, 2006). Authentic leaders are genuine by nature, thus they do not believe in using extrinsic rewards as a means to attract followers. They have a high regard for enticing followers by targeting their internal values. Consequently, these leaders inspire their followers by showing genuineness, which clearly highlights their moral behaviour (Ilies et al., 2005; Valsania et al., 2012).

Intelligence and leadership go well together, therefore leaders with a considerable degree of intelligence are known to be more effective and bring about positive outcomes for the organisation. In view of the above, morality is viewed as one of the most important requirements for leadership. This may be accounted to the fact that moral leaders have proved to be effective,

influential and they inspire their followers to achieve the best results for their work environment, and consequently the whole organisation. Thus, the commendable work of morally intelligent leaders spirals down to the entire organisation and it echoes positive work outcomes (Lennick & Kiel, 2005, 2006, 2011; May, Hodges, Chan & Avolio, 2003; Waskithol, Arif, Maskum & Susanto as cited in Beheshtifar et al., 2011).

Moral leaders can create an open and safe work environment where a culture of reporting ethical issues is recognised and positively reinforced, thereby encouraging followers to value and engage in moral behaviour (Hannah et al., 2011). Authentic leaders also encourage open communication with followers, thus building a work culture of benevolence and integrity (Avolio et al., 2004). It is for this reason that authentic leaders are seen to uphold strong moral values of righteousness, honesty, trust and positivity. According to Bandura (1999) authentic leaders are moral agents who are responsible for their own moral behaviour as well as that of their subordinates. Authentic leaders are moral beings that encourage and inspire moral behaviour within their organisations.

An authentic leadership style is associated with the aspects of positive psychological capacity (Walumbwa et al., 2010), hence authentic leaders have the potential and ability to elicit positive behaviour in their followers, which consequently results in positive outcomes like honesty, work commitment, trust, work engagement and OCB (Walumbwa et al., 2008). It was also found that authentic leaders are high on moral intelligence. This is based on the fact that these leaders are known for their truthfulness and geniuses, thus they uphold the principle of continuously doing the right things in line with universal values (Avolio & Gardner, 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008). Morally intelligent leaders (such as authentic leaders) have the ability to distinguish right from wrong as defined by universal principles (Borba, 2001; Clarken, 2009; Lennick & Kiel, 2005, 2006, 2011). Thus, it can be concluded that authentic leaders are guided by moral principles, therefore they apply moral intelligence in their leadership (Walumbwa et al., 2008; Walumbwa et al., 2010).

Recent events and workplace scandals show a huge gap in work ethics and employee/ employer ethical conduct. This in turn calls for morally uplifting leaders. It is for this reason that morality in leadership can no longer be seen as anything short of a paramount requirement and an absolute necessity. To effectively address the gap of workplace ethics, it is paramount to introduce morally and ethically uplifting leaders, such as authentic leaders, as these leaders are

not only morally uplifting, but they also uphold the value of integrity and morality for themselves, their followers and their organisation (Walumbwa et al., 2008). It is clear from these descriptions that authentic leaders uphold moral values, thereby affirming the strong link between the authentic leadership and morality. It can therefore be concluded that authentic leaders are high on moral intelligence, therefore they act with morality and integrity when conducting their work (Hannah et al., 2005; Sendjaya, Pekerti, Hartel, Hirst & Butarbutar, 2016).

It can thus be hypothesized that moral intelligence has a positive influence on authentic leadership.

2.9 THE RELATIONSHIP BETWEEN INTEGRITY AND AUTHENTIC LEADERSHIP

Authentic leadership involves a high level of positive moral perspective and character. These leaders are characterised by high ethical standards that guide their decision making process and behaviour, as such that authentic leaders reflect transparency, genuineness and consistency in their thoughts, values and behaviour. These leaders are guided by internal values such as integrity, and as a result they are not easily influenced by external pressures (Avolio & Gardner, 2005; Luthans & Avolio, 2003; Peterson & Seligman, 2004; Walumbwa et al., 2008; Walumbwa et al., 2010).

Authentic leadership has its roots in positive psychology, positive organisational behaviour and positive organisational scholarship, hence it is associated with positive outcomes such as psychological well-being, enhanced performance, trust, OCB, employee engagement and commitment (Toor & Ofori, 2009). It is clear from these positive work outcomes that authentic leaders, just like transformational, ethical and savant leaders, have the ability to inspire, motivate and elicit positive behaviour among followers. Therefore, followers view these leaders as exemplary and inspirational. However, it must be made clear that other leadership theories (like transformational leadership) focus more on leader-follower interaction, whereas authentic leaders focus on internal qualities of a leader like leader-integrity (Cottrill et al., 2014).

According to Palanski and Yammarino (2007, 2009) authentic leadership and leader behavioural integrity are not the same. These authors are of the opinion that authentic functioning is internally directed and addresses one's ability to remain true to oneself, while leader behavioural integrity focuses on the external factors, as it considers others perceptions of

your alignment between words and deeds (Simons, 2002). On the contrary Kannan-Narasimhan and Lawrence (2012) and Walumbwa et al. (2008) argue that authentic leadership and integrity are intertwined. They hold the view that authentic leaders are rated high on behavioural consistency and they are also known as people of integrity because this leadership style is built on similar values as the construct of integrity (Walumbwa et al., 2008). In addition, Leroy et al. (2012) found that authentic leadership is significantly related to leader behavioural integrity ($y = 0.27$, $p < 0.05$).

Research by Kannan-Narasimhan and Lawrence (2012) also indicated that integrity is viewed as one of the key expectations of followers from authentic leaders. In addition, Baccili (2001) is of the opinion that employees expect integrity from their immediate supervisors even if the organisation does not explicitly or implicitly encourage integrity; therefore, the value of integrity is an inherent requirement for effective leadership.

When analysing the construct of authentic leadership, it affirms that for leaders to be regarded as authentic, they must adhere to certain pre-requirements, which include the following: consistency in their words and deeds; religiously upholding and adhering to their internal moral values and principles; as well as having high resistance for external influences and temptation. The above requirements touch on the overall wholeness perspectives as well as the moral and ethical perspective of the construct of integrity as described by Palanski and Yammario (2007, 2009, 2011) in their five categories of integrity. According to the comprehensive discussion on integrity, there is a clear link between authentic leadership and integrity. In support of the above, research on leader integrity and authentic leadership found that leader-integrity behaviour was significantly related to authentic leadership (Cottrill et al., 2014; Hannes, Palanski & Simons, 2012; Kannan-Narasimhan & Lawrence, 2012). Therefore, it is evident that leaders would be more authentic if they are driven by the value of integrity.

It can therefore be hypothesized that integrity has a positive effect on authentic leadership.

2.10 THE RELATIONSHIP BETWEEN INTEGRITY AND MORAL INTELLIGENCE

The construct of integrity continues to receive much attention in the field of leadership, to the extent that some leadership styles like ethical, servant, transformational and authentic leadership, are viewed as having a strong link to the construct of integrity itself. The link

between the two constructs (integrity and leadership) has grown and prompted researchers to refer to these constructs jointly as leader behavioural integrity (Simons, 1999, 2002). Because leaders that are rated high on integrity uphold ethical principles and values, they are regarded as moral beings. These leaders that uphold integrity, are not only open, genuine and honest in the alignment of their thoughts, words and behaviour, they also consider moral aspects prior to making decisions and acting upon their decisions (Palanski & Yammarino, 2011, Walumbwa et al., 2008; Yukl, 2013).

A morally embedded leadership style like authentic leadership, indicates a link between leader-integrity and perceived leader-moral-behaviour. The link between leadership and the concept of morality and integrity may be ascribed to the fact that leaders are surrounded by followers that look up to them, as upholding high moral codes and ethical behaviour are expected from leaders (Palanski & Yammarino, 2011; Walumbwa et al., 2008).

Leaders high on integrity and morality have the potential to inspire positive organisational outcomes like OCB, team effectiveness, employee engagement, commitment, productivity, trust, psychological empowerment, and motivation (Simons, 1999; Sims & Brinkman, 2002; Walumbwa et al., 2008; Yukl, 2013; Zhu et al., 2004). A study by Van Aswegen and Engelbrecht (2009) found that leaders with integrity have the potential to create an ethical climate in the organisation, thus instilling moral and ethical codes in their followers. In addition, Bauman (2013) is of the opinion that ethically and morally guided leaders with moral integrity are consistent in their behaviour, thus these leaders conduct themselves according to moral principles and values, showing integrity and morality in their thoughts, decisions and actions.

Furthermore, Lennick and Kiel (2005, 2006, 2011) are of the opinion that the value of integrity is embedded in the construct of moral intelligence, as a result integrity forms part of the competencies of moral intelligence. Therefore, it may be concluded that leaders that have a high moral intelligence, have a high regard for integrity. In addition, leader-integrity and leader moral intelligence are inseparable, because when making decisions, a leader with integrity consults his internal moral principles to guide his thoughts, decisions and behaviour (Borba, 2001; Lennick & Kiel, 2005, 2006, 2011).

It can therefore be stated that a person that is rated high on integrity is regarded as highly ethical and moral. The same deduction was made about leaders with moral intelligence. As

such, Six et al. (2007) believes that integrity is the quality of moral self-governance – self-governance under moral standards. Based on the above studies it should be expected that leaders with integrity will enhance their own level of moral intelligence.

It can therefore be hypothesized that leader integrity has a positive influence on leader moral intelligence.

2.11 STRUCTURAL MODEL

Based on the literature review as discussed above, a structural model focused on the postulated relationships between integrity, moral intelligence, authentic leadership and OCB was conceptualised. This structural model (Figure 2.2) reflects the proposed relationships among the different constructs. The structural model consists of one exogenous or independent variable, namely integrity and it is indicated by the symbol KSI (ξ) as well as three endogenous or dependent variables, which include moral intelligence, authentic leadership and OCB – these are indicated by the symbol ETA (η). The symbol GAMMA (γ) is used to specify paths between the exogenous and endogenous variables, and on the other hand the symbol BETA (β) is used to specify paths between the endogenous variables. The errors in structural equation are depicted by the symbol ZETA (ζ). In addition the ZETA symbol also describes the error terms of the three endogenous variables.

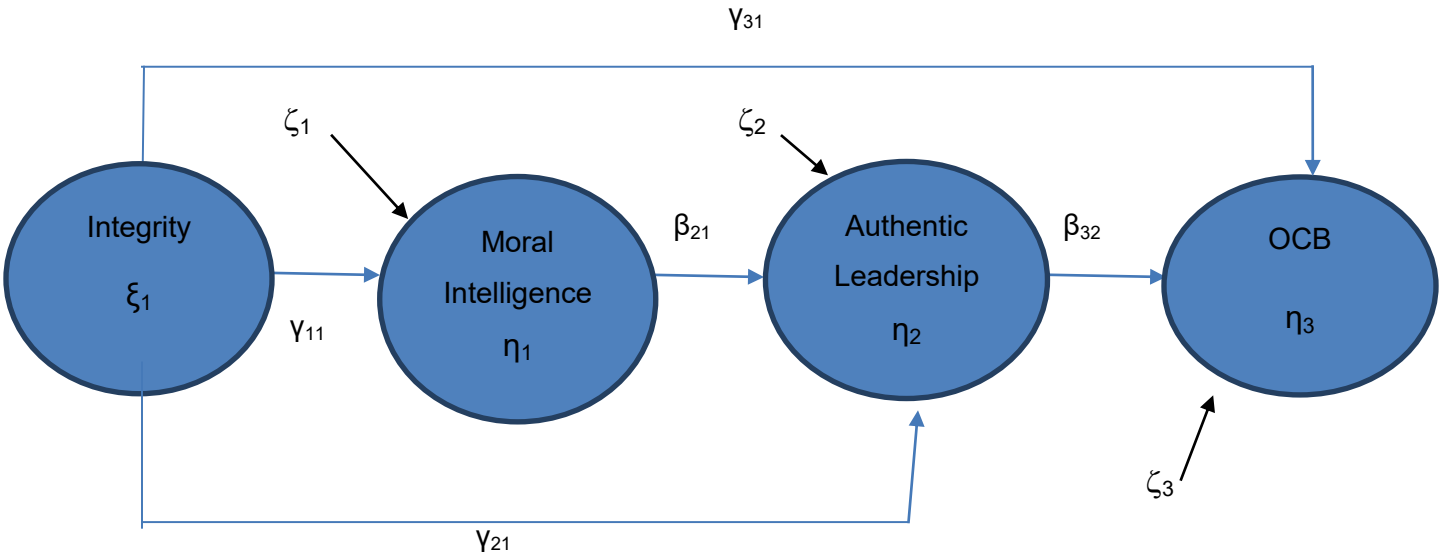

***Figure 2.2*: The conceptual structural model representing the relationship between integrity, moral intelligence, authentic leadership and OCB.**

2.12 SUMMARY

This chapter outlined a theoretical and empirical review of integrity, moral intelligence authentic leadership and OCB. In this chapter attention was directed to the conceptual meaning, understanding and relationships among these constructs. In addition, some hypotheses were postulated and a structural model was constructed. The next chapter focuses on research methodology and it will thus be used as a platform to empirically test the proposed hypotheses.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Following a comprehensive research conducted on the applicable constructs of this study (as reflected in chapter two), relationships between integrity, moral intelligence, authentic leadership and OCB were proposed. The proposed relationships between constructs were depicted in a form of a structural model. In order to determine the exact nature of these relationships, the conceptual structural model had to be fitted with the data and the hypothesised relationships that go along with the model had to be empirically investigated.

This chapter outlines the research design, the measuring instruments, the statistical hypotheses, the method of sampling and the statistical analysis that was utilised in the empirical testing of the afore mentioned model. This analysis was used to determine the model fit, the strengths and the paths of the hypothesised relationships.

3.2 RESEARCH DESIGN

The proposed structural model of this study as depicted in Figure 3.1 represents and hypothesises the structural relationships between latent variables in the model. Thus, to empirically test the structural relationships a valid and reliable plan is required, this plan will be used to guide the empirical evidence and test the operational hypotheses. In statistical terms the plan referred to above is known as the ‘research design’.

In essence the research design is a detailed plan used to provide information on how research is to be conducted. The purpose of the research design is to try and ensure empirical evidence can be interpreted unambiguously for or against the stated hypotheses (Theron, 2014). The research design achieves this through control of variance in the measures of the endogenous latent variables. More specifically the primary function of a research design is to maximize systematic variance, to minimize error variance and to control systematic non-relevant variance (Babbie & Mouton, 2001).

For the purpose of this study an *ex post facto* correlation design was used. This research design enables the researcher to observe and determine the causal relationships in the identified (dependent and independent) variables across individuals to establish the extent to which they co-vary. This is done without any direct control over the independent variables, thus this research design is used in the structural model because the latent variables cannot be manipulated (Babbie & Mouton, 1998; Babbie & Mouton, 2001).

3.3 SAMPLING DESIGN AND PROCEDURE

3.3.1 Sampling Technique

Sampling can be described as a process of taking a sub-set or segment of a population and using it as a representative of that population (Bryman & Bell, 2003). There are two methods that can be employed for sampling namely: the probability sampling method/technique and the non-probability sampling method/technique (Babbie & Mouton, 2001). The probability sampling method entails random selection of a sample from a name list of everyone forming part of the population in which the researcher has an interest. This method is more accurate and mostly preferred and used in research. However, it is not always practical or attainable as it requires more time and resources. The non-probability sampling method on the other hand involve the use of a procedure in which elements have unequal chances of being included, thus this sampling method relies on personal judgement rather than chance (Babbie & Mouton, 2001; Malhotra, 2004). To meet the objective of this study the non-probability sampling method was viewed as the most appropriate method to use as an alternative. Therefore, the non-probability convenience sampling technique was used to select the sample for the study.

3.3.2 Data Collection Procedure

Data for this study was collected from the SANDF. Institutional permission was obtained via a formal letter to the South African National Defence Force's (SANDF) Defence Intelligence (DI) office. Officer Commanding's (OC's) of various military units were approached through various means of communication (face-to-face, telephonic and written). The unit OC that agreed were requested to brief the members about the research and have them assembled in a central venue on an agreed date and time, where all the willing and available members were requested to complete a paper and pencil/pen questionnaire. Thus, the sample for this research was

selected based on the availability and willingness of the individual participants and the approval of the OC's of various military units. Data for this study was collected anonymously to solely protect the identity and confidentiality of individual participants, their supervisors and the specific military units.

Structural Equation Modelling (SEM) is a large sample technique, and tests of model fit are based on the assumption of large samples, thus a sample size of 200 observations will be suitable for this study (Babbie & Mouton, 2001). In order to evaluate the influence of integrity and moral intelligence on authentic leadership and OCB a sample of 287 uniformed members of the SANDF from various military units responded and was used for this study. Participants were required to agree to the conditions and instructions of the study as stipulated on the paper and pencil/pen questionnaire. The questionnaire required the following biographic data from the participants: the employee's age, gender, race, rank group level and description of the organisation. The targeted sample included participants of the following rank groups:

- Private/Seaman (non-managerial level).
- Candidate Officer/Midshipman (non-managerial level).
- Lance-Corporal to Corporal/Leading Seaman (lower level management).
- Sargent/ Patty-Officer to Staff-Sargent/ Chief Patty-Officer (lower level management).
- Warrant Officer Class 2 to Warrant Officer Class 1 (middle level management).
- Second–Lieutenant to Lieutenant (middle level management).

In all the sessions where data collecting was done the researcher briefed participants in detail by informing them about the details of the study including the purpose of the study, assured them of the study's confidentiality and that their responses will not be revealed to management and that participation is not compulsory, but voluntary. Participants were also assured that the study poses no potential risks, harm or discomfort and that there were no financial or related benefits for participating.

Upon volunteering to participate in the study, participants were required to evaluate their immediate supervisor's perceived integrity, moral intelligence and authentic leadership. Finally, participants had to also evaluate their own OCB. The obtained raw data was imported into a Microsoft Excel database, where it was used as input for the statistical analysis programme. Initially the research planned to use an online questionnaire and a paper and pencil/pen

questionnaire, however due to challenges of obtaining permission from military units that have access to the Internet the online questionnaire was not utilised, thus only the paper and pencil/pen questionnaire was used for data collection.

3.3.3 The Demographic Profile of the Sample

The overall sample consisted of 287 respondents from the SANDF, of which 119 (41.6%) were female and 167 (58.4%) were male. Respondents were between the ages of 20 to 59, with the average age being 34, indicating that the majority of the sample was between the ages of 29 and 39. Table 3.1 provides a detailed breakdown of the sample.

Table 3.1

Demographic variables

DEMOGRAPHIC VARIABLES	FREQUENCY	% IN SAMPLE
Gender		
Male	167	58.4
Female	119	41.6
Race		
African	242	84.6
Indian	1	.3
Coloured	21	7.3
White	22	7.6
Job level		
Non-managerial	89	31.3
Lower level management	140	49.2
Middle level management	56	19.5
Military unit		
Unit A	7	2.4
Unit B	86	30.0
Unit C	38	13.2

Unit D	24	8.4
Unit E	7	2.4
Unit F	8	2.8
Unit G	4	1.4
Unit H	32	11.1
Unit I	13	4.5
Unit J	68	23.6

3.4 MISSING VALUES

Prior to commencing with data analysis it is important to address missing values. Missing values are a result of the respondent's unwillingness to respond to a particular item in the questionnaire. According to Byrne (2001), Kline (2011), and Theron, Spangenberg and Henning (2004), there are various methods that may be utilised for addressing missing values in social research and they include:

- List-wise deletion – is the preferred and widely used method of addressing the issue of missing values. This method entails that all cases which contain missing values are excluded from the study.

- Pair-wise deletion – unlike list-wise deletion this method entails deletion of cases only on the variables containing missing values.

- Imputation by matching – this method entails replacing missing values with an estimate value. This method therefore results in a completed data set.

- Multiple imputation – is where a number of imputations are made that each creates a completed data set.

In this study, the multiple imputation method was utilised.

3.5 MEASURING INSTRUMENTS

This study is mainly based on four different constructs (OCB, authentic leadership, moral intelligence and integrity); therefore, four measuring instruments were used to measure the applicable constructs. The measuring instruments used in this study already existed, however some of the instruments were adapted to fit the purpose of this study.

3.5.1 Organisational Citizenship Behaviour (OCB)

OCB was measured using the OCB Scale (OCBS) developed by Podsakoff et al. (1990). The OCBS consists of 24 items measuring five subscales of OCB as conceptualised by Organ (1988) (altruism, conscientiousness, sportsmanship, courtesy and civic virtue). Numerous validation studies conducted on this instrument indicate the reliability of these subscales to be satisfactory with the Cronbach's alphas ranging from .70 for civic virtue to .85 for altruism (Mahembe & Engelbrecht, 2014). For purpose of this study the instrument was adapted to a five-point Likert scale ranging from 1- disagree strongly to 5 – agree strongly.

3.5.2 Authentic Leadership

Neider and Schriesheim (2011) developed a new measure for authentic leadership, the Authentic Leadership Inventory (ALI). Neider and Schriesheim (2011) used the same four dimensions for the ALI as used by Walumbwa et al. (2008) for the ALQ. The dimensions include: self-awareness, internalised moral perspective, balanced processing and rational transparency. The ALI consists of 16 items utilising a five-point Likert scale (with the respondents' answers ranging from 1= disagree strongly to 5 = agree strongly).

Some of the questions respondents rate in the ALI include questions like: "My leader clearly states what he/she means; My leader encourages others to voice opposing points of view," and "my leader openly shares information with others". The lowest coefficient alpha for the scale was .74 and the highest being .85 (Neider & Schriesheim, 2011). The ALI shows acceptable internal consistency reliability of greater than .70 making it an acceptable measure of authentic leadership (Nunnally & Bernstein, 1994).

3.5.3 Moral Intelligence

Moral intelligence was measured with the use of the Moral Competency Inventory (MCI). Lennick and Kiel (2008) developed this instrument. The MCI has a total of forty items and it is rated on a five-point Likert scale, ranging from 1 to 5 (e.g. 1 = Never; 2 = Infrequently; 3 = Sometimes; 4 = In most situations; and 5 = In all situations). The MCI focuses on ten competencies, namely: acting consistently with principles, values and beliefs; telling the truth, standing up for what is right, keeping promises, taking responsibility for personal choices, admitting mistakes and failures, embracing responsibility for serving others, actively caring about others, ability to let go of one's own mistakes, ability to let go of others mistakes.

The internal consistencies of the ten competencies of the MCI vary from 0.65 to 0.84 (Lennick & Kiel, 2011). For the purpose of this study the MCI was adapted from self-rating to other-rating to include a total of 29 items, with the last two competencies ('ability to let go of one's own mistakes' and 'ability to let go of others mistakes') removed from the questionnaire.

3.5.4 Integrity

Leader integrity was measured with the use of the newly developed integrity scale, the Ethical Integrity Test (EIT) by Engelbrecht (Du Toit, 2015). The items were measured using a 5-point Likert scale ranging from "disagree strongly to agree strongly". The EIT defines ethical integrity as acting in accordance with universally accepted ethical principles, values and norms. The test comprises of five dimensions, behavioural consistency, righteousness, frankness, credibility, and fairness (Du Toit, 2015). Explanation of the dimensions is provided in Table 3.2 below.

Table 3.2

Ethical Integrity Test Dimensions

Dimensions	Definitions
Behavioural consistency	Refers to behaving persistently in an ethical way; exhibits moral courage to behave consistently in adversity and temptation; and applies the same fundamental principles over time and to a variety of situations. The individual practises what he/she preaches despite of social and emotional pressures
Righteousness	Refers to behaving ethically and respectable; practising moral virtues and acts in terms of moral principles
Frankness	Refers to acting with truthfulness, authenticity and sincerity
Credibility	Refers to trustworthy, responsible, reliable and dependable behaviour in accordance with the ethical rules and norms of the organisation.
Fairness	Refers to treating people equitable and with dignity and respect, makes impartial and objective decisions, and does justice to all

(Du Toit, 2015)

The EIT comprises of 66 items in total where each dimension has a number of items aimed at measuring a specific dimension. The breakdown of all the items is depicted in Table 3.3.

The statistical analysis of the EIT produced favourable results in terms of the Cronbach's Alpha, which is .971 for the entire scale. The individual dimensions produced the following Cronbach Alpha's: behavioural consistency: .736; credibility: .852; frankness: .912; fairness: .862 and righteousness: .911 (Du Toit, 2015). These coefficients exceed .70 and therefore, are an acceptable measure for integrity (Nunnally & Bernstein, 1994).

Table 3.3

Ethical Integrity Test Items

Dimension	No of items	Example of item
Behavioural consistency	10	Item 5: I consistently behave in an ethical way Item 19: I practice what I preach
Righteousness	14	Item 20: I use my moral beliefs to make decisions Item 35: My behaviour is guided by sound principles
Frankness	14	Item 7: I shall tell the truth, even under pressure from others Item 16: People can believe what I say
Credibility	15	Item 22: People can depend on me Item 37: I keep promises that I make to others
Fairness	13	Item 23: My major concern is always what is best for the other person Item 28: I treat people with dignity and respect

(Du Toit, 2015)

3.6 STATISTICAL DATA ANALYSIS

After the gathering data for all the four constructs, the data was statistically analysed to test the hypothesised relationships between the variables. Item analysis, Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) include the statistical techniques that were utilised in this study.

3.6.1 Item Analysis

Internal consistency reliability of an instrument may be estimated by using item analysis, thus item analysis reflects the internal consistency reliability of the scores provided by the indicators measuring the specific latent variable. Variables that do not represent the specific latent variable were therefore identified through item analysis; these items were regarded as poor items (Ding & Lin, 2006). Thus, elimination of these items was then considered (Theron et al., 2004). According to Nunnally (1978) a measure is reliable to the extent to which it can produce the same results regardless of any opportunities for variation that might occur.

To determine the reliability of the four scales based on internal consistency, the coefficient alphas were calculated. Nunnally (1978) is of the opinion that the size of the reliability coefficient is based on two things: the average correlation among items (internal consistency) and the number of items. Cronbach's alphas range from 0 to 1 and the closer the values are to 1 the greater the internal consistency of the items in the scale. According to Nunnally (1978) the following guidelines are applicable to evaluate the reliability of the scales and subscales:

- .90 and above is excellent
- .80 - .89 is good
- .70 - .79 is adequate
- Below .70 may have limited applicability.

Therefore, items with a Cronbach's alpha of above .70 are acceptable and thus regarded as satisfactory (Nunnally & Bernstein, 1994). In addition, Malhotra (2004) is of the opinion that coefficient alphas greater than .6 also indicate acceptable internal consistency of a measure. Thus, for the purpose of this study the criterion as set out by Malhotra (2004) was applied for item analysis. Item analysis was done on all four measurement scales and subscales with the use of the SPSS Reliability Procedure, this was done to identify possible poor items for elimination.

3.6.2 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a statistical technique used for testing hypotheses or theories relating to the structure underlying a set of variables (Pallant, 2007). LISREL 8.80 was used to perform CFA separately on the different subscales used in this study. The results from the CFA are discussed per dimension in terms of important fit indices.

According to Kline (2011), an acceptable good model fit is indicated when the P-value for Close Fit > .05 and RMSEA < .80. In addition, Diamantopoulos and Siguaw (2000) are of the opinion that the results of the chi-square test together with the RMSEA, Standardised RMR, GFI and CFI indices are more than sufficient to make conclusions regarding the measurement model fit. Thus based on the principles as set out by Diamantopoulos and Siguaw measurement model fit will be determined as such. When this is the case, each item should be evaluated in terms of the completely standardised factor loadings (LAMDA-X). Acceptable items will have a value > .50, which is an indication that the item contributes successfully to the coherency of the subscale. If all items load significantly on the latent variable, the factor analysis is completed. When an item does not load significantly on the latent variable the item is considered for deletion.

3.6.3 Structural Equation Modelling

Structural Equation Modelling (SEM) is a statistical technique utilised in this study. The purpose of SEM is to estimate the strength of the relationships between latent variables un-attenuated by the measurement error (Little, Cunningham, Shahar & Widaman, 2002). SEM was performed by making use of LISREL 8.80. Kelloway (1998) provide the following reasons as to why SEM is preferred and used in research:

- Firstly, SEM deals directly with how the measure reflects the intended constructs through CFA and also allows the researcher to evaluate the measurement properties of certain scales,
- Secondly, SEM allows for the specification and testing of complex path models, and

- Finally, SEM is used to simultaneously assess the quality of the measurement and examine the predictive relationships among constructs by performing CFA and path analysis.

The reliability of measurement in the model can be captured with the use of SEM; this in turn permits the structural relationships between the latent variables to be accurately estimated. Thus, researchers can develop complex relationships and test them through SEM if the relationships are reflected in the sample data. In the case where weaknesses are identified and confirmed the researcher would engage in further exploration and utilise a modified model and a new sample (Western & Gore, 2006).

3.6.4 The Structural Model

Based on the literature review as discussed in Chapter 2, a structural model focused on the postulated relationships between integrity, moral intelligence, authentic leadership and OCB was conceptualised (see Figure 3.1). The structural model consists of one exogenous or independent variable, which is integrity and is indicated by the symbol KSI (ξ) and three endogenous or dependent variables, which include moral intelligence, authentic leadership and OCB, these are indicated by the symbol ETA (η). The symbol GAMMA (γ) is used to specify paths between the exogenous and endogenous variables, on the other hand the symbol BETA (β) is used to specify paths between the endogenous variables. The errors in structural equation are depicted by the symbol ZETA (ζ), in addition the ZETA symbol also describes the error terms of the three endogenous variables.

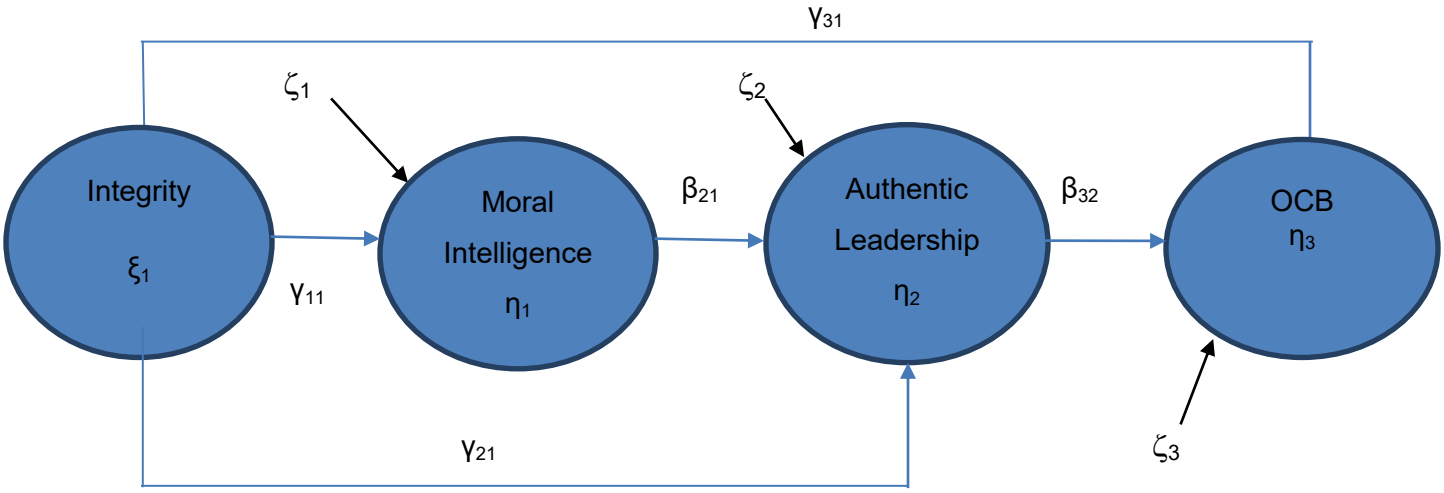

***Figure 3.1**:* **The structural model representing the relationship between integrity, moral intelligence, authentic leadership and OCB with LISREL symbols.**

3.6.5 Substantive Research Hypotheses

In empirical research studies, researchers employ various research design strategies to provide answers to empirical research questions and problems. To understand the suitable approach, it is important to be familiar with the purpose of this study. The objective of this study is to analyse the influence of a leaders' integrity and moral intelligence on authentic leadership and follower's OCB. The theoretical argument presented in the literature study resulted in integrity, moral intelligence, authentic leadership and OCB as latent variables in the structural model, depicted in Figure 3.1.

The overarching substantive hypotheses of this study is that the structural model depicted in Figure 3.1 provides a valid account of the leadership elements that determines a leader's integrity, moral intelligence and authentic leadership as well as the follower's willingness to engage in OCB. To achieve the objective of this study the following path specific hypotheses were tested:

Hypothesis 1: Authentic leadership has a positive influence on employee OCB.
Hypothesis 2: The leader's integrity has a positive influence on employee OCB.
Hypothesis 3: A leader's moral intelligence has a positive influence on authentic leadership.
Hypothesis 4: The **l**eader's integrity has a positive influence on authentic leadership.

Hypothesis 5: The leader's integrity has a positive influence on a leader's moral intelligence.

3.6.6 Statistical Hypotheses

The statistical hypotheses are articulated in a manner that depicts the proposed research design and the nature of the anticipated statistical analyses. This study investigated the nature of the effect that leader integrity, moral intelligence and authentic leadership has on employee OCB. The objective of this study together with accumulated research and the proposed structural model led to the formulation of research hypotheses. The structural model as depicted in Figure 3.1 indicated the relevant latent variables for this study.

If the model provides an impeccable account of the manner in which integrity and moral intelligence influence authentic leadership and OCB, the substantive research hypothesis would translate into the following exact fit null hypothesis:

H_{01}: RMSEA = 0

H_{a1}: RMSEA > 0

On the other hand, if the model would be understood as only providing an approximate explanation of the manner in which integrity and moral intelligence influence authentic leadership and OCB, the substantive research hypothesis would translate into the following close fit null hypothesis:

H_{02}: RMSEA ≤ 0.05

H_{a2}: RMSEA > 0.05

The overarching substantive research hypothesis was divided into five more detailed research hypotheses, which may be transformed into the following path statistical hypotheses:

Hypothesis 3:

Authentic leadership (η_2) has a significant positive influence on employee OCB (η_3).

H_{03}: $\beta_{32} = 0$

H_{a3}: $\beta_{32} > 0$

Hypothesis 4:

Integrity (ξ_1) has a significant positive influence on employee OCB (η_3).

H_{04}: $\gamma_{31} = 0$
H_{a4}: $\gamma_{31} > 0$

Hypothesis 5:

Moral intelligence (η_1) has a significant positive influence on authentic leadership (η_2).

H_{05}: $\beta_{21} = 0$
H_{a5}: $\beta_{21} > 0$

Hypothesis 6:

Integrity (ξ_1) has a significant positive influence on authentic leadership (η_2).

H_{06}: $\gamma_{21} = 0$
H_{a6}: $\gamma_{21} > 0$

Hypothesis7:

Integrity (ξ_1) has a significant positive influence on a leader's moral intelligence (η_1).

H_{07}: $\gamma_{11} = 0$
H_{a7}: $\gamma_{11} > 0$

Table 3.4

The Statistical Hypotheses

Hypothesis 3	**Hypothesis 4**	**Hypothesis 5**
H_{03}: $\beta_{32} = 0$	H_{04}: $\gamma_{31} = 0$	H_{05}: $\beta_{21} = 0$
H_{a3}: $\beta_{32} > 0$	H_{a4}: $\gamma_{31} > 0$	H_{a5}: $\beta_{21} > 0$
Hypothesis 6	**Hypothesis 7**	
H_{06}: $\gamma_{21} = 0$	H_{07}: $\gamma_{11} = 0$	
H_{a6}: $\gamma_{21} > 0$	H_{a7}: $\gamma_{11} > 0$	

3.7 ASSESSING MODEL FIT

SEM is mostly used to assess model fit. Over the years a wide range of goodness-of-fit statistics were developed to assess model fit. Kelloway (1998) refers to goodness-of-fit indices for assessing absolute and comparative fit.

3.7.1 Absolute Fit

Absolute fit indices are explained as proportions of the covariance in the sample data matrix explained by the model (Kline, 2011, p. 195). Thus, the purpose of the test of absolute fit is to assess how well a model reproduces the sample data. The test of absolute fit involves the performance of a number of measures including:

- The first measure of fit is the chi-square statistic, which is a traditional measure for evaluating overall fit. It provides a test of perfect fit. A statistically significant chi-square leads to the rejection of the model (Diamantopoulos & Siguaw, 2000). The null hypothesis tested by the chi-square is H0: $\Sigma = \Sigma(\theta)$. The aim here is to not reject H0 and the Satorra Bentler $\chi 2$ statistic is used to test this hypothesis. A Satorra Bentler value that is non-significant indicates that the model fits the data well in that the model can reproduce the population covariance matrix. The null hypothesis of exact fit is unrealistic, thus it is more appropriate to assess the p-value for the test of close fit (RMSEA < 0.05) (Kelloway, 1998).

- The chi-square is sensitive to sample size, however in order to avoid an increase in the $\chi 2$ with an increase in sample size, the $\chi 2$ should be expressed in terms of its degrees of freedom (i.e. $\chi 2/df$). Disagreement about the interpretation of the values for $\chi 2/df$ exists in the literature, however good fit is generally indicated by values between 2 and 5. A value less than 2 indicates over fitting (Kelloway, 1998).

- LISREL reports a number of Absolute fit indices. The Goodness-of-fit Index (GFI) directly assesses how well the covariances predicted from the parameter estimates reproduce

the sample covariance. The GFI ranges from 0 (poor fit) to 1 (perfect fit), with values exceeding 0.9 assumed to indicate a good fit of the model to the data (Kelloway, 1998).

- The Root Mean Square Residual (RMR) is a measure of the average value of the difference between the sample covariance matrix and a fitted covariance matrix reproduced by the theoretical model (Diamantopoulos & Siguaw, 2000). It is generally accepted that the lower the index, the better the fit of the model to the data. The standardised RMR represents fitted residuals divided by their estimated standard errors and has a lower bound of 0 and an upper bound of 1, with values less than 0.05 interpreted as indicating a good fit to the data (Kelloway, 1998).

- The Root Mean Square Error of Approximation (RMSEA) is regarded as one of the most informative fit indices. Smaller values indicate a better fit to the data. Values lower than 0.05 indicates a good fit, values between 0.05 and 0.08 indicate a reasonable fit, values between 0.08 and 0.10 are of mediocre fit, while values above 0.10 are viewed as indicating poor fit (Diamantopoulos & Siguaw, 2000).

3.7.2 Comparative Fit

Comparative fit also referred to as incremental fit, represents the relative improvement in fit of the model compared to the statistical baseline model. The baseline model refers to the independence (null) model. Kelloway (1998) is of the opinion that the null model indicates no relationship between the variables composing the model. Comparative fit measures reported are the Normed-Fit Index (NFI), The Non-Normed Fit Index (NNFI), the Incremental Fit Index (IFI), the Comparative Fit Index (CFI), the Relative Fit Index (RFI) and the Adjusted Goodness-of-Fit Index (AGFI). The above mentioned fit indices all have a range of 0 to 1. Values closer to 1 especially values >.90 represent good fit (Kelloway, 1998).

All the goodness-of-fit indices as described above are summarised in Table 3.5. These indices were used for the purpose of reaching a meaningful conclusion regarding model fit.

Table 3.5

Criteria of goodness-of-fit indices

Goodness-of-fit indices	Criteria
Absolute fit measures	
Minimum fit function Chi-Square	A non-significant result indicates exact model fit.
$\chi 2/df$	Values between 2 and 5 indicate good fit.
Root Mean Square Error of Approximation (RMSEA)	Values of 0.08 or below indicate acceptable fit, those below 0.05 indicate good fit, and values below 0.01 indicate outstanding fit.
P-Value for Test of Close Fit (RMSEA < 0.05)	Values > 0.05 indicate close fit.
90% Confidence Interval for RMSEA	This is a 90% confidence interval of RMSEA testing the closeness of fit i.e. - testing the hypothesis Ho: RMSEA < 0.05).
Root Mean Square Residual (RMR)	Lower values indicate better fit, with values below 0.08 indicative of good fit.
Standardised RMR	Lower values indicate better fit, with values less than 0.05 indicating good fit
Goodness of Fit Index (GFI	Values closer to 1 and > 0.90 represent good fit.
Incremental Fit measures	
Normed Fit Index (NFI)	Values closer to 1 indicate better fit, with values > 0.09 indicative of good fit.
Non-Normed Fit Index (NNFI)	Higher values indicate better fit, with values > 0.90 indicative of good fit.
Adjusted Goodness of Fit (AGFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of good fit.
Comparative Fit Index (CFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of good fit.
Incremental Fit Index (IFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of good fit.
Relative Fit Index (RFI)	Values closer to 1 indicate better fit, with values > 0.90 indicative of good fit.

(Diamantopoulos & Siguaw, 2000; Kelloway, 1998)

3.8 ETHICAL CONSIDERATIONS

When conducting research, it is important for the researcher to adhere to the set ethical guidelines. This study made ethical considerations in order to keep to the proper ethical practices of research. Ethical considerations therefore involve the evaluation of what is right and wrong when conducting research (Mouton, 2001).

Data gathered for this study was used for the purpose of this study. Personal details of the respondents that volunteered to participate in this study were not included, thus the respondents remained anonymous. The research questionnaire used was used to collect demographic and biographic information of the respondents by looking at factors such as: the respondent's age, gender, race, military rank and description of organisation, thus the researcher could not trace the identity of the individual respondents.

An application for ethical clearance of the proposed research study was submitted and approved by the Research Ethics Committee Human Research (Humanities) of Stellenbosch University.

3.9 SUMMARY

This chapter provided an overview of the research methodology utilised, as well as the process of gathering and interpreting data. In addition, this chapter included the sampling technique employed, data collection procedure, measuring instruments utilised, statistical hypotheses, as well as the measures used to evaluate model fit and the strength and paths of the envisaged hypotheses. The results of this study will be presented in the following chapter (Chapter 4). The interpretation and implications of the results will be provided in chapter 5.

CHAPTER 4
PRESENTATION OF RESEARCH RESULTS

4.1 INTRODUCTION

After conducting extensive research on the relevant literature, relationships between the constructs of interest (integrity, authentic leadership, moral intelligence and organisational citizenship behaviour) were proposed. These relationships were depicted and thoroughly discussed through a theoretical model presented in Chapter 2. Based on the theoretical model, hypotheses were proposed with regard to the constructs. These proposed hypotheses together with structural and measurement models were tested by means of a proposed research methodology (see Chapter 3). In the current chapter, the aim is to provide a detailed account of the results obtained through data analysis by means of the statistical data analysis process.

The measures of the four constructs of interest were subjected to reliability analysis and CFA analysis; this was done mainly to determine the reliability and fit of the measurement models. The structural model containing the different relationships between the constructs also underwent the statistical analysis to determine model fit. Hypotheses identified in Chapter 2 were tested to determine the relationships between the constructs. This chapter therefore provides an account of the findings based on the statistical processes described above.

4.2 MISSING VALUES

Most research studies (especially data collected from a large sample with the use of a paper-and-pencil questionnaire) present with cases of missing data. Thus, prior to commencing with data analysis, the presence of missing values has to be determined and addressed. Owing to the method of data collection employed for this study, the presence of missing values was inevitable; however, the researcher employed measures to minimise the presence thereof. This was done by checking the questionnaire with the participant/respondent upon submission. As previously mentioned, missing values are difficult if not impossible to avoid when using hard-copy questionnaires. A few questionnaires with missing values were therefore present and these were dealt with by using the multiple imputation method with LISREL 8.80.

4.3 ITEM ANALYSIS

All four measurement scales were subjected to item and reliability analysis; this was done to identify items that did not depict the reliability of a respective scale. The reliability of each subscale of the measurement instruments was determined using Cronbach's alpha as indicator. Cronbach's alpha values should preferably exceed the value of .70 in order to be seen as a reliable scale (Pallant, 2007). However, according to Malhotra (2004), reliability values greater than .60 are also regarded as indicators of internal consistency in a measure. Cronbach alpha values > .60 were therefore regarded as satisfactory and acceptable indicators of internal consistency in this study.

It must be highlighted that subscales with values of .60 and below were monitored during further analysis and the items of such subscales were considered for elimination when the need arose. However, the effect of eliminating such an item on the reliability and validity of the scale was determined before any item was eliminated.

In addition to the Cronbach alpha indicator, the Corrected Item-Total Correlation was also examined, as it indicates the degree to which each item correlated with the total score. According to Pallant (2007), values greater than .30 may indicate that the item is measuring the specific latent variable and those lower may indicate the contrary.

4.4 RELIABILITY ANALYSIS OF THE ETHICAL INTEGRITY TEST (EIT)

The EIT consist of 66 items related to five subscales, namely behavioural consistency, righteousness, frankness, credibility and fairness. Each of these subscales was subjected to item analysis.

4.4.1 Reliability results: Behavioural consistency subscale

Table 4.1 represents the reliability results of the Behavioural Consistency subscale, which consists of ten items. The Cronbach's alpha of the subscale was found to be .942. According to the guidelines set out by Nunnally (1978), reliability values that are .90 and above are

considered excellent. All items presented an item-total correlation above the recommended cut-off value of .30. Thus, no items were considered problematic on this subscale. In addition, there was no significant increase in the alpha value if any of the items were to be deleted.

Table 4.1

Reliability and Item-Total Statistics of the Behavioural Consistency subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.942	.942	10

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Integ5	28.09	75.555	.721	.572	.938
Integ14	28.36	74.253	.743	.621	.937
Integ19	28.36	72.349	.794	.666	.934
Integ24	28.10	76.830	.705	.521	.938
Integ29	28.07	73.517	.758	.660	.936
Integ34	28.21	72.590	.854	.753	.931
Integ39	28.02	74.905	.778	.670	.935
Integ44	28.12	75.322	.704	.596	.938
Integ49	28.15	73.011	.767	.725	.936
Integ54	28.04	71.813	.793	.714	.934

4.4.2 Reliability results: Credibility subscale

Reliability results of the 15-item credibility subscale are shown in Table 4.2 below. The Cronbach alpha of this subscale was .954. This reliability value is considered excellent (Nunnally, 1978). It is significant to note that the Cronbach's alpha for items 3 and 27 would indicate a marginal increase in the overall alpha should they be deleted from this scale. These items were not deleted as the increase in Cronbach's alpha if the item were to be deleted would

be a marginally one. Looking at the item-total correlation, all the items in this subscale are greater than .30, which indicates the absence of any problematic items. Consequently, no items were flagged as poor items, thus no items were deleted from this subscale.

Table 4.2

Reliability and Item-Total Statistics of the Credibility subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.954	.954	15

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Integ3	44.27	181.015	.533	.348	.955
Integ8	44.57	171.498	.738	.666	.951
Integ12	44.63	171.115	.766	.726	.951
Integ17	44.72	171.104	.782	.737	.950
Integ22	44.77	168.896	.833	.719	.949
Integ27	44.48	179.195	.521	.333	.956
Integ32	44.76	169.042	.797	.687	.950
Integ37	44.75	170.141	.839	.755	.949
Integ42	44.71	168.816	.841	.786	.949
Integ47	44.57	174.043	.726	.617	.951
Integ52	44.68	169.094	.857	.759	.949
Integ57	44.66	171.513	.761	.662	.951
Integ61	44.32	173.451	.718	.597	.952
Integ64	44.57	178.582	.609	.456	.954
Integ66	44.76	169.440	.818	.700	.949

4.4.3 Reliability results: Fairness subscale

Table 4.3 presents the reliability results of the Fairness subscale, which consists of thirteen items. This subscale has an excellent overall reliability coefficient of .960. It is significant to note

that all the items appeared to correlate well with the subscale score, as all items presented an item-total correlation above the recommended cut-off value of .30; thus, no items were considered problematic on this subscale. In addition, there would be no significant increase in the alpha if any of the items were to be deleted. Finally, no items were flagged as poor on this subscale; hence there were no deletions.

Table 4.3

Reliability and Item-Total Statistics of the Fairness subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.960	.960	13

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Integ4	36.88	154.534	.757	.599	.958
Integ9	36.86	155.020	.752	.579	.958
Integ13	37.06	156.010	.739	.626	.958
Integ18	36.95	155.295	.815	.730	.956
Integ23	36.95	154.099	.829	.720	.956
Integ28	36.61	151.806	.817	.705	.956
Integ33	37.07	152.342	.798	.677	.957
Integ38	36.95	154.294	.780	.660	.957
Integ43	36.51	161.545	.643	.457	.960
Integ48	36.77	155.931	.833	.707	.956
Integ53	36.83	154.993	.823	.701	.956
Integ58	36.98	152.478	.839	.727	.956
Integ62	36.78	152.219	.839	.747	.956

4.4.4 Reliability results: Frankness subscale

With regard to the 14-item frankness subscale of the EIT, the Cronbach's alpha was found to be .961, which indicates an excellent reliability value (Nunnally & Bernstein, 1994). All items presented an item-total correlation above the recommended cut-off value of .30 and no items were considered problematic on this subscale. In addition, there would be no significant increase in the alpha if any of the items were to be deleted. The reliability and item-total correlation results for the frankness subscale are presented in Table 4.4.

Table 4.4

Reliability and Item-Total statistics of the Frankness subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.961	.961	14

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Integ2	42.19	158.985	.753	.659	.959
Integ7	42.18	157.300	.798	.695	.958
Integ11	42.07	159.072	.804	.672	.958
Integ16	41.93	160.370	.750	.611	.959
Integ21	42.16	155.620	.861	.791	.956
Integ26	41.84	158.935	.813	.683	.958
Integ31	41.92	158.626	.823	.700	.957
Integ36	41.97	158.583	.811	.717	.958
Integ41	41.70	162.037	.655	.508	.961
Integ46	41.74	164.244	.643	.475	.961
Integ51	42.00	157.402	.827	.714	.957
Integ56	42.02	158.520	.827	.727	.957
Integ60	41.99	158.524	.817	.693	.957
Integ65	41.83	159.867	.776	.652	.958

4.4.5 Reliability results: Righteousness subscale

The final subscale of the EIT, which is righteousness, is composed of fourteen items. This subscale indicated an overall Cronbach's alpha of .957, which indicates excellent reliability (Nunnally, 1978). All the item-total correlations for righteousness reflected values above .30, which indicates the absence of problematic values; hence no items were deleted from this subscale. The reliability and item-total correlation results for the righteousness subscale are reported in Table 4.5.

Table 4.5

Reliability and Item-Total statistics of the Righteousness subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.957	.958	14

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Integ1	42.21	140.984	.739	.584	.955
Integ6	42.13	140.374	.807	.684	.953
Integ10	42.10	145.730	.753	.599	.955
Integ15	42.04	146.628	.630	.446	.957
Integ20	42.14	145.626	.685	.510	.956
Integ25	41.93	146.398	.681	.481	.956
Integ30	42.16	142.834	.773	.625	.954
Inte35	42.14	143.740	.794	.650	.954
Integ40	42.17	141.755	.785	.668	.954
Integ45	42.24	142.414	.845	.757	.953
Integ50	42.17	140.144	.802	.699	.954
Integ55	42.16	140.683	.852	.765	.952
Integ59	42.17	143.599	.755	.629	.955
Integ63	42.07	140.747	.860	.772	.952

4.5 RELIABILITY ANALYSIS OF THE MORAL COMPETENCY INVENTORY (MCI)

The 40-item MCI of Lennick and Kiel (2008) was adapted from self-rating to other-rating to suit the purpose of this study. Thus, for this research the MCI had a total of only 29 items with eight subscales which included: acting consistently with principles, values and beliefs; telling the truth; standing up for what is right; keeping promises; taking responsibility for personal choices; admitting mistakes and failures; embracing responsibility for serving others; and actively caring about others. Each of these subscales was subjected to item analysis.

4.5.1 Reliability results: Acting consistently with principles, values and beliefs

Reliability results of the 2-item, "acting consistently with principles, values and beliefs" subscale are shown in Table 4.6. The Cronbach's alpha of this subscale was .863. This is satisfactory and above the recommended reliability value (Nunnally, 1978). Looking at the item-total correlations, it is seen that all the items in this subscale correlated above .30, which indicates the absence of problematic items; therefore, no items were deleted from this subscale.

Table 4.6

Reliability and Item-Total statistics of the Acting Consistently with Principles, Values and Beliefs subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.863	.864	2

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral1	3.16	1.312	.760	.578	.
Moral15	3.29	1.178	.760	.578	.

4.5.2 Reliability results: Telling the truth

With regard to the 3-item telling the truth subscale of the MCI, the Cronbach's alpha was found to be .885, which indicates good reliability value (Nunnally, 1978). All items presented an item-total correlation above the recommended cut-off value of .30, resulting in the conclusion that none of the three items in this subscale presented as problematic when considering results of the item-total correlations. However, when looking at the Cronbach's alpha if items were deleted, Cronbach's alpha for item 23 would increase (.028). This item was not deleted as the scale only had three items and the deletion of the item would not result in substantial change in the reliability of the subscale. The reliability and item-total correlation results for the subscale of telling the truth are presented in Table 4.7.

Table 4.7

Reliability and Item-Total statistics of the subscale for Telling the Truth

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.885	.885	3

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral8	6.23	5.227	.829	.727	.790
Moral16	6.19	5.356	.824	.723	.794
Moral23	6.08	6.400	.686	.471	.913

4.5.3 Reliability results: Standing up for what is right

Table 4.8 presents results for the standing up for what is right subscale. The Cronbach's alpha was found to be .860. This is above the acceptable value for reliability analysis (Nunnally & Bernstein, 1994). All items presented an item-total correlation above the recommended cut-off

value of .30 and no items were considered problematic on this subscale. In addition, there was no substantial increase in the alpha values should any of the items be deleted.

Table 4.8

***Reliability and Item-Total statistics of the subscale for Standing up for what is* Right**

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.860	.859	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral2	9.68	10.364	.623	.402	.853
Moral9	10.26	9.014	.704	.507	.822
Moral17	10.20	8.789	.730	.544	.811
Moral24	10.05	8.750	.770	.594	.793

4.5.4 Reliability results: Keeping promises

Reliability results of the 4-item keeping promises subscale are shown in Table 4.9. The Cronbach's alpha of this subscale was found to be .913. This shows an excellent reliability value (Nunnally, 1978). Looking at the item-total correlation, all the item correlations in this subscale are greater than .30, which indicates the absence of problematic items, thus no items were deleted from this subscale.

Table 4.9

Reliability and Item-Total statistics of the subscale on Keeping Promises

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.913	.914	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral3	9.34	10.763	.777	.624	.897
Moral10	9.71	9.508	.849	.722	.871
Moral18	9.53	10.523	.820	.672	.883
Moral25	9.53	10.033	.774	.611	.899

4.5.5 Reliability results: Taking responsibility for personal choices

Reliability results of the 4-item taking responsibility for personal choices subscale are shown in Table 4.10. Cronbach's alpha of this subscale was found to be .916. This reliability value is considered excellent (Nunnally, 1978). Looking at the item-total correlation, all the item correlations in this subscale are greater than .30, which indicates the absence of problematic items; hence no item was deleted from this subscale.

Table 4.10

Reliability and Item-Total statistics of the subscale for Taking Responsibility for Personal Choices

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.916	.916	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral4	9.51	11.370	.756	.600	.909
Moral11	9.39	10.497	.870	.758	.869
Moral19	9.18	11.480	.809	.681	.891
Moral26	9.46	11.585	.800	.652	.894

4.5.6 Reliability results: Admitting mistakes and failures

Reliability results for the admitting mistakes and failures subscale of the MCI are presented in Table 4.11 below. The Cronbach's alpha for this subscale presented the value of .927, which, according to Nunnally (1978), is regarded as an excellent reliability value. The item-total correlations show that all items present a value above the acceptable cut-off value of greater than .30. Thus, no items were deleted from this subscale.

Table 4.11

Reliability and Item-Total statistics of the subscale on Admitting Mistakes and Failures

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.927	.927	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral5	9.34	11.157	.838	.709	.902
Moral12	9.28	11.322	.840	.711	.901
Moral20	9.22	11.545	.832	.693	.904
Moral27	9.30	11.784	.807	.654	.912

4.5.7 Reliability results: Embracing responsibility for serving others

Table 4.12 presents results on the 4-item embracing responsibility for serving others subscale. The Cronbach's alpha for this subscale was .911, which indicates an excellent reliability value (Nunnally, 1978; Nunnally & Bernstein, 1994). The item-total correlation for this subscale reflects values above .30, which indicates the absence of problematic items; as such, no items were deleted from this subscale.

Table 4.12

Reliability and Item-Total statistics of the subscale for Embracing Responsibility for Serving others

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.911	.911	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral6	9.33	11.153	.789	.624	.888
Moral13	9.42	11.363	.778	.606	.892
Moral21	9.41	10.586	.824	.679	.876
Moral28	9.60	10.891	.804	.649	.883

4.5.8 Reliability results: Actively caring about others

The final subscale of the MCI (actively caring about others) as reflected in Table 4.13 resulted in a Cronbach's alpha of .910. This is an excellent reliability value according to Nunnally (1978). The item-total correlations for the actively caring about others subscale resulted in values greater than the recommended cut-off value (.30), which indicates the absence of problematic values. No items were deleted from this subscale.

Table 4.13

Reliability and Item-Total statistics of the Actively Caring for Others subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.910	.910	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Moral7	9.46	10.983	.775	.602	.890
Moral14	9.60	10.366	.823	.683	.873
Moral22	9.53	10.537	.790	.633	.885
Moral29	9.64	10.344	.793	.638	.884

4.6 RELIABILITY ANALYSIS OF AUTHENTIC LEADERSHIP INVENTORY (ALI)

The ALI consists of 16 items which are related to four subscales, namely Self-Awareness, Relational Transparency, Internalised Moral Perspective and Balanced Processing. Each of these subscales was subjected to item analysis.

4.6.1 Reliability results: Self-awareness

Table 4.14 presents reliability results for the Self-awareness subscale, which consists of four items. Cronbach's alpha for this subscale was found to be .901. This reliability value is considered excellent (Nunnally, 1978). From the item-total statistics it is evident that the item-total correlations of all the items are > .30, which indicates the absence of problematic items. It is also noted that there was no significant increase in the alpha if any of the items were to be deleted.

Table 4.14

Reliability and Item-Total Statistics of the* Self-Awareness *subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.901	.902	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ALead1	9.43	9.771	.763	.599	.878
ALead5	9.55	9.689	.819	.678	.858
ALead9	9.52	9.649	.807	.655	.862
ALead13	9.32	9.772	.729	.538	.891

The results of the Self-awareness subscale did not raise any concerns, thus no items were flagged as problematic, and consequently no items were deleted.

4.6.2 Reliability results: Relational transparency

Table 4.15 denotes the reliability results for the Relational transparency subscale of the ALI, which consists of four items. Cronbach's alpha for this subscale was found to be .924, which, according to Nunnally (1978), is an excellent reliability value. It was found that the item-total correlations were all above the recommended cut-off value of .30. Thus, no items were flagged as problematic for this subscale.

Table 4.15

Reliability and Item – Total Statistics of the Relational Transparency subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.924	.924	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ALead2	9.38	11.853	.802	.643	.908
ALead6	9.76	11.080	.832	.699	.898
ALead10	9.64	11.098	.816	.668	.903
ALead14	9.53	11.558	.845	.718	.894

4.6.3 Reliability results: Internalised moral perspective

For the 4-item internalised moral perspective dimension of the ALI, the Cronbach's alpha was found to be .913, as reflected in Table 4.16 below. This value indicates excellent reliability for this subscale (Nunnally & Bernstein, 1994). All items indicated good item-total correlations, with values greater than .30. No items were deleted from this subscale.

Table 4.16

Reliability and Item – Total Statistics of the Internalised Moral Perspective subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.913	.914	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ALead3	9.46	9.263	.819	.675	.882
ALead7	9.44	9.359	.802	.653	.888
ALead11	9.55	9.808	.779	.615	.896
ALead15	9.46	9.683	.811	.659	.885

4.6.4 Reliability results: Balanced processing

The final subscale of the ALI, which is balanced processing, consists of four items. This subscale obtained an excellent Cronbach's alpha of .921, as reflected in Table 4.17. All the item-total correlations for this subscale were greater than the recommended cut-off value of .30. It is also evident that there would be no substantial change in the overall reliability should any of the items be deleted.

Table 4.17

Reliability and Item – Total Statistics of the Balanced Processing subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.921	.921	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ALead4	9.29	11.564	.832	.694	.892
ALead8	9.25	11.189	.826	.693	.894
ALead12	9.24	11.468	.824	.683	.895
ALead16	9.35	11.445	.789	.628	.907

4.7 RELIABILITY ANALYSIS OF THE ORGANISATIONAL CITIZENSHIP BEHAVIOUR SCALE (OCBS)

Podsakoff et al. (1990) developed the OCB scale used in this study. This scale consists of twenty-four items measured by five subscales namely civic virtue, courtesy, sportsmanship, conscientiousness and altruism. All the subscales of the OCBS were subjected to item analysis. Below are the results.

4.7.1 Reliability results: Civic virtue

The civic virtue subscale of the OCBS consists of four items. This subscale obtained a Cronbach's alpha of .642, as shown in Table 4.18. Malhotra (2004) is of the opinion that coefficient alphas greater than .6 indicate an acceptable reliability value. All the item-total correlations for this subscale were greater than the recommended cut-off value of .30. It is also evident that there would be no substantial change in the overall reliability if any of the items were to be deleted, thus no items were flagged as problematic in this subscale.

Table 4.18

Reliability and Item – Total Statistics of the Civic Virtue subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.642	.650	4

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OCB6	11.29	5.122	.435	.209	.570
OCB9	11.57	4.833	.347	.129	.629
OCB11	11.65	4.061	.469	.233	.541
OCB12	11.13	4.952	.464	.254	.550

4.7.2 Reliability results: Courtesy

For the 5-item courtesy dimension of the OCBS the Cronbach's alpha resulted in a value of .704. According to Nunnally (1978), values ranging from .70 to .79 are considered acceptable and are thus regarded as satisfactory. All items obtained item-total correlations above .30, emphasising that there was no need to delete items from this subscale. In addition, none of the items' Cronbach's alpha would increase if they were removed from this subscale, thus no items were flagged as problematic. Hence, no items were deleted from this subscale. Table 4.19 reflects the results of this subscale.

Table 4.19

Reliability and Item – Total Statistics of the Courtesy subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.704	.716	5

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OCB4	16.40	5.234	.536	.315	.629
OCB8	16.88	5.007	.382	.149	.696
OCB14	16.40	5.178	.482	.290	.646
OCB17	16.60	5.151	.547	.328	.623
OCB20	16.87	5.197	.397	.165	.683

4.7.3 Reliability results: Sportsmanship

Reliability results of the 5-item sportsmanship subscale are shown in Table 4.20 below. The Cronbach's alpha of this subscale was .684. Nunnally (1978) is of the opinion that reliability values below .70 may have limited applicability; according to Malhotra (2004), however, coefficient alphas greater than .6 indicate acceptable internal consistency of a measure.

Furthermore, the item-total correlations for all items in this subscale are greater than .30, which indicates the absence of problematic items. In addition, there would be no substantial increase in the alpha value if any of the items were to be deleted. Hence, no item was deleted from this subscale. This subscale will be monitored during further analysis.

Table 4.20

Reliability and Item-Total Statistics of the Sportsmanship subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.684	.688	5

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OCBR5	13.26	9.390	.612	.404	.551
OCBR16	13.82	11.067	.339	.129	.679
OCBR7	12.75	10.911	.502	.308	.611
OCBR19	13.65	10.745	.417	.186	.643
OCBR2	13.80	11.279	.348	.149	.672

4.7.4 Reliability results: Conscientiousness

Table 4.21 represents the reliability results of the conscientiousness subscale which consists of five items. The Cronbach's alpha of the subscale was found to be .715. This reliability value is considered satisfactory and acceptable (Nunnally, 1978; Nunnally & Bernstein, 1994). All items presented an item-total correlation above the recommended cut-off value of .30. Results for this subscale did not raise any concerns, thus no items were deleted.

Table 4.21

Reliability and Item-Total Statistics of the Conscientiousness subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.715	.723	5

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OCB3	16.24	6.409	.441	.204	.680
OCB18	16.35	6.144	.443	.220	.680
OCB21	16.73	6.015	.376	.161	.715
OCB22	16.27	5.638	.586	.359	.620
OCB24	16.19	6.176	.555	.333	.640

4.7.5 Reliability results: Altruism

Regarding the 5-item altruism subscale of the OCBS, the Cronbach's alpha was found to be .724. This reliability value is considered satisfactory and acceptable (Nunnally & Bernstein, 1994). All items appeared to have item-total correlations greater than .30 and no items were flagged as problematic, therefore no items were removed from this subscale. Reliability results of this subscale are presented in Table 4.22.

Table 4.22

Reliability and Item-Total Statistics of the Altruism subscale

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.724	.734	5

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OCB1	16.45	5.661	.482	.260	.678
OCB10	16.14	5.619	.576	.473	.645
OCB13	16.81	5.365	.410	.176	.717
OCB15	16.30	5.483	.582	.458	.641
OCB23	16.59	6.005	.407	.198	.706

4.8 SUMMARY OF THE ITEM ANALYSIS RESULTS

A comprehensive summary of the results for item analysis performed on the relevant scales (EIT, MCI, ALI and OCBS) for this study are reflected in Table 4.23. The results reflect adequate internal consistency for the scales and subscales, thus all the scales used for this study are considered to be internally consistent and reliable. No poor items were deleted. It must be noted that the items flagged as potentially problematic was monitored during further analysis.

Table 4.23

Summary of the Item Analysis Results

Scale	*Mean*	*Std deviation*	*Cronbach's alpha*	*No of Items deleted*	*No of Items retained*
EIT: Consistency	31.28	9.528	.942	0	10
EIT: Credibility	47.80	14.048	.954	0	15
EIT: Fairness	39.93	13.450	.960	0	13
EIT: Frankness	45.20	13.566	.961	0	14
EIT: Righteousness	45.37	12.856	.957	0	14
Total EIT	209.58	61.955	.990	0	66
MCI: Acting Consistently	6.45	2.093	.863	0	2
MCI: Telling the truth	9.25	3.471	.885	0	3
MCI: Standing up for what is right	13.40	3.959	.860	0	4
MCI: Keeping promises	12.70	4.199	.913	0	4
MCI: Taking responsibility	12.51	4.407	.916	0	4
MCI: Admitting mistakes	12.38	4.458	.927	0	4
MCI: Embracing responsibility for serving	12.59	4.358	.911	0	4
MCI: Actively caring about others	12.74	4.268	.910	0	4
Total MCI	92.03	29.658	.986	0	29
ALI: Self-awareness	12.61	4.090	.901	0	4
ALI: Relational transparency	12.77	4.445	.924	0	4
ALI: Internalised moral perspective	12.63	4.058	.913	0	4
ALI: Balanced processing	12.38	4.447	.921	0	4
Total ALI	50.39	16.464	.977	0	16
OCBS: Altruism	20.57	2.868	.724	0	5

OCBS: Sportsmanship	16.82	3.932	.684	0	5
OCBS: Conscientiousness	20.45	2.977	.715	0	5
OCBS: Courtesy	20.79	2.738	.704	0	5
OCBS: Civic Virtue	15.21	2.744	.642	0	4
Total OCBS	93.87	9.890	.816	0	24

4.9 EVALUATING THE MEASUREMENT MODELS

LISREL 8.80 was used to perform CFA on all the scales and subscales used in this study (Jöreskog & Sörbom, 1996). CFA was performed to investigate the goodness-of-fit between measurement models and the data obtained.

After looking at the fit indices for the measurement models, the factor loadings were investigated by looking at the Completely Standardised LAMBDA-X matrices, where items with values above 0.50 are interpreted as loading sufficiently on the corresponding latent variable (Brown, 2006; Hu & Bentler, 1999).

4.10 EVALUATING THE MEASUREMENT MODEL FIT OF THE ETHICAL INTEGRITY TEST (EIT)

The EIT was used to assess the five subscales of leader integrity. The process of evaluating the measurement model for the EIT was done by simultaneously including the five subscales for CFA. The fit indices reported in Table 4.28 indicate that the EIT measurement model obtained a reasonable fit. The results for the absolute fit measures were calculated by a variety of indices including the $\chi 2/df$, RMSEA, P-value for Close Fit, Root Mean Residual (RMR), Standardised RMR and Goodness of Fit (GFI). The fit statistics indicated that the measurement model appeared to fit the data reasonably well with a RMSEA value of 0.0594 (Brown, 2006; Diamantopoulos & Siguaw, 2000; Pedhazur & Schmelkin, 1991). Although the P-value for Close Fit gave a value of 0.000, which suggests that the null hypothesis of close fit should be rejected, it could be concluded that the measurement model did obtain a reasonable fit based on the RMSEA value.

The $\chi 2/df$ ratio was calculated using the Satorra-Bentler Scaled Chi-Square divided by the Degrees of Freedom. A $\chi 2/df$ value of 2.008 was obtained, which fell within the range for good fit

(2 – 5). The RMR value of .0552 indicated acceptable fit (< 0.08); and the Standardised RMR value of 0.0389 also fell within the range of good fit (< 0.05). According to Hair, Anderson, Tatham and Black (1998); Hu and Bentler (1999) and Kelloway (1998), the standardised RMR is a better fit index than the RMR.

Values of the GFI should range between 0 and 1, with values above 0.90 indicting a good fit. A GFI value of 0.612 was obtained, which missed the cut-off values for good fit (0.90). Therefore, even though the indices for absolute fit were generally reasonable, it was concluded that the measurement model of the EIT presented reasonable fit. The results of the incremental fit indices indicated that the measurement model achieved Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI) and Relative Fit Index (RFI) indices that were all above .90, which represented good fit. These comparative indices therefore appeared to reveal a positive picture of model fit. The measurement model could therefore be said to provide a credible explanation of the observed covariance matrix.

The unstandardised LAMBDA-X matrix was used to determine the significance (t values ≥ |1.96) of the factor loadings hypothesised by the EIT measurement model. Significant loadings confirm the validity of the indicators. The values presented in the completely standardised LAMBDA-X solution matrix represent the regression slopes of the regression of the standardised indicator variables on the standardised latent variable. All the items loaded significantly and satisfactorily above 0.50 on the corresponding subscale of the leader integrity latent variable. This indicated that all items significantly represent the dimensions they were designed to reflect. The LAMBDA-X matrix can be seen in Table 4.24. The result was that no items were deleted.

Table 4.24

Completely standardised LAMBDA-X matrix for the EIT

LAMBDA-X

	CONSISTENCY	CREDIBILITY	FAIRNESS	FRANKNESS	RIGHTEOUSNESS
Integ1	- -	- -	- -	- -	0.749
Integ2	- -	- -	- -	0.773	- -
Integ3	- -	0.523	- -	- -	- -
Integ4	- -	- -	0.744	- -	- -
Integ5	0.746	- -	- -	- -	- -
Integ6	- -	- -	- -	- -	0.818
Integ7	- -	- -	- -	0.800	- -
Integ8	- -	0.740	- -	- -	- -
Integ9	- -	- -	0.741	- -	- -

Integ10	- -	- -	- -	- -	0.753
Integ11	- -	- -	- -	0.819	- -
Integ12	- -	0.762	- -	- -	- -
Integ13	- -	- -	0.748	- -	- -
Integ14	0.779	- -	- -	- -	- -
Integ15	- -	- -	- -	- -	0.624
Integ16	- -	- -	- -	0.768	- -
Integ17	- -	0.771	- -	- -	- -
Integ18	- -	- -	0.812	- -	- -
Integ19	0.836	- -	- -	- -	- -
Integ20	- -	- -	- -	- -	0.686
Integ21	- -	- -	- -	0.877	- -
Integ22	- -	0.856	- -	- -	- -
Integ23	- -	- -	0.839	- -	- -
Integ24	0.695	- -	- -	- -	- -
Integ25	- -	- -	- -	- -	0.701
Integ26	- -	- -	- -	0.828	- -
Integ27	- -	0.534	- -	- -	- -
Integ28	- -	- -	0.817	- -	- -
Integ29	0.819	- -	- -	- -	- -
Integ30	- -	- -	- -	- -	0.767
Integ31	- -	- -	- -	0.848	- -
Integ32	- -	0.819	- -	- -	- -
Integ33	- -	- -	0.809	- -	- -
Integ34	0.875	- -	- -	- -	- -
Inte35	- -	- -	- -	- -	0.814
Integ36	- -	- -	- -	0.827	- -
Integ37	- -	0.855	- -	- -	- -
Integ38	- -	- -	0.786	- -	- -
Integ39	0.806	- -	- -	- -	- -
Integ40	- -	- -	- -	- -	0.801
Integ41	- -	- -	- -	0.650	- -
Integ42	- -	0.863	- -	- -	- -
Integ43	- -	- -	0.675	- -	- -
Integ44	0.705	- -	- -	- -	- -
Integ45	- -	- -	- -	- -	0.839
Integ46	- -	- -	- -	0.641	- -
Integ47	- -	0.737	- -	- -	- -
Integ48	- -	- -	0.853	- -	- -
Integ49	0.765	- -	- -	- -	- -
Integ50	- -	- -	- -	- -	0.834
Integ51	- -	- -	- -	0.823	- -
Integ52	- -	0.872	- -	- -	- -
Integ53	- -	- -	0.849	- -	- -
Integ54	0.794	- -	- -	- -	- -
Integ55	- -	- -	- -	- -	0.868
Integ56	- -	- -	- -	0.855	- -
Integ57	- -	0.796	- -	- -	- -
Integ58	- -	- -	0.839	- -	- -
Integ59	- -	- -	- -	- -	0.796
Integ60	- -	- -	- -	0.824	- -
Integ61	- -	0.744	- -	- -	- -
Integ62	- -	- -	0.851	- -	- -
Integ63	- -	- -	- -	- -	0.870
Integ64	- -	0.608	- -	- -	- -
Integ65	- -	- -	- -	0.770	- -
Integ66	- -	0.836	- -	- -	- -

4.11 EVALUATING THE MEASUREMENT MODEL FIT OF THE MORAL COMPETENCY INVENTORY (MCI)

To evaluate the fit of the measurement model for the MCI, all its eight dimensions were subjected to CFA in one measurement model. The fit indices reported in Table 4.28 indicate that the MCI measurement model obtained acceptable fit. The results for the absolute fit measures were calculated by a variety of values including the χ2/df, RMSEA, P-value for Test of Close Fit, Root Mean Residual (RMR), Standardised RMR and Goodness-of-Fit (GFI). A RMSEA value of 0.0544 and a P-value of 0.135 for Test of Close Fit were found. These values indicate acceptable fit; thus the null hypothesis of close fit was accepted.

The RMR value of .0438 showed good fit. In addition, the Standardised RMR value of 0.0299 also fell within the range of good model fit (< 0.05). The GFI value of 0.798 and χ2/df value of 1.846 were obtained, which marginally missed the cut-off value for good fit. However, the results of the incremental fit indices indicated that all were above 0.90, which is an indication for good fit. Thus, the measurement model could be said to provide a credible explanation of the observed covariance matrix (Hair, Black, Babin, Anderson & Tatham; 2006; Gefen, Sraub, & Boudreau, 2000).

Table 4.25 below presents the results for the completely standardised LAMBDA-X matrix. All items loaded satisfactorily on the relevant latent variables, with values greater than 0.50, which indicates that all items satisfactorily and significantly (t values ≥ |1.96) represent the subscales they were designed to reflect.

Table 4.25

Completely standardised LAMBDA-X matrix for the MCI

LAMBDA-X

	PVB	TT	SR	KP	TR	AMF	SO	CA
Moral1	0.829	- -	- -	- -	- -	- -	- -	- -
Moral2	- -	- -	0.647	- -	- -	- -	- -	- -
Moral3	- -	- -	- -	0.827	- -	- -	- -	- -
Moral4	- -	- -	- -	- -	0.814	- -	- -	- -
Moral5	- -	- -	- -	- -	- -	0.867	- -	- -
Moral6	- -	- -	- -	- -	- -	- -	0.836	- -
Moral7	- -	- -	- -	- -	- -	- -	- -	.797
Moral8	- -	0.897	- -	- -	- -	- -	- -	- -

Moral9	- -	- -	0.806	- -	- -	- -	- -	- -
Moral10	- -	- -	- -	0.903	- -	- -	- -	- -
Moral11	- -	- -	- -	- -	0.910	- -	- -	- -
Moral12	- -	- -	- -	- -	- -	0.916	- -	- -
Moral13	- -	- -	- -	- -	- -	- -	0.845	- -
Moral14	- -	- -	- -	- -	- -	- -	- -	0.875
Moral15	0.897	- -	- -	- -	- -	- -	- -	- -
Moral16	- -	0.905	- -	- -	- -	- -	- -	- -
Moral17	- -	- -	0.803	- -	- -	- -	- -	- -
Moral18	- -	- -	- -	0.863	- -	- -	- -	- -
Moral19	- -	- -	- -	- -	0.834	- -	- -	- -
Moral20	- -	- -	- -	- -	- -	0.859	- -	- -
Moral21	- -	- -	- -	- -	- -	- -	0.871	- -
Moral22	- -	- -	- -	- -	- -	- -	- -	0.849
Moral23	- -	0.736	- -	- -	- -	- -	- -	- -
Moral24	- -	- -	0.823	- -	- -	- -	- -	- -
Moral25	- -	- -	- -	0.813	- -	- -	- -	- -
Moral26	- -	- -	- -	- -	0.856	- -	- -	- -
Moral27	- -	- -	- -	- -	- -	0.809	- -	- -
Moral28	- -	- -	- -	- -	- -	- -	0.811	- -
Moral29	- -	- -	- -	- -	- -	- -	- -	0.814

4.12 EVALUATING THE MEASUREMENT MODEL FIT OF THE AUTHENTIC LEADERSHIP INVENTORY (ALI)

The ALI with its four subscales was subjected to CFA with the aim of evaluating the fit of the measurement model. The fit statistics indicated that the measurement model showed a good fit (RMSEA = 0.0345; P-value for test of Close Fit = 0.962). Therefore, the H_o for close fit could not be rejected. The RMR of 0.0314 together with the Standardised RMR of 0.0222 showed good fit. The $\chi 2/df$ value of 1.340 missed the cut-off values for good fit (2 – 5). However, the GFI of 0.909 indicated good fit (> .90). The results of the incremental fit indices indicated values above 0.90. Therefore, it can be said that the measurement model provided a credible explanation of the observed covariance matrix (Hair et al., 2006; Hu & Bentler, 1999).

Table 4.26 presents the factor loadings for the ALI completely standardised LAMBDA-X matrix. All the values for the factor loadings were satisfactory, being above the acceptable cut-off value (> 0.50). It could therefore be concluded that all the items in this scale (ALI) significantly (t values ≥ |1.96) represented the subscales they were designed to measure.

Table 4.26

Completely standardised LAMBDA-X matrix for the ALI

LAMBDA-X

	SA	RT	BP	MORAL
ALead1	0.821	- -	- -	- -
ALead2	- -	0.816	- -	- -
ALead3	- -	- -	- -	0.885
ALead4	- -	- -	0.860	- -
ALead5	0.860	- -	- -	- -
ALead6	- -	0.879	- -	- -
ALead7	- -	- -	- -	0.809
ALead8	- -	- -	0.854	- -
ALead9	0.863	- -	- -	- -
ALead10	- -	0.842	- -	- -
ALead11	- -	- -	- -	0.823
ALead12	- -	- -	0.877	- -
ALead13	0.750	- -	- -	- -
ALead14	- -	0.896	- -	- -
ALead15	- -	- -	- -	0.847
ALead16	- -	- -	0.812	- -

4.13 EVALUATING THE MEASUREMENT MODEL FIT OF THE ORGANISATIONAL CITIZENSHIP BEHAVIOUR SCALE (OCBS)

The five subscales of the OCBS were all subjected to CFA in one measurement model, in order to evaluate the measurement model fit. The value for RMSEA was 0.0576 and the P-value for test of Close Fit was 0.0531, indicating reasonable fit. Looking at the values as described above, it can be said that the null hypothesis for close fit is accepted.

The RMR of 0.0759 and Standardised RMR of 0.0791 were obtained, with a GFI of 0.858, which indicated values marginally outside the range for good fit. The $\chi 2/df$ value of 1.950 marginally missed the cut-off values for good fit. The results of the incremental fit indices indicated values above 0.90. The results of the chi-square test, together with the RMSEA, P-value for test of Close Fit, GFI and incremental fit indices, are more than sufficient to draw conclusions regarding acceptable model fit (Diamantopoulos & Siguaw, 2000; Hu & Bentler, 1999). Based on the above, it can be concluded that the results of the measurement model provided a reasonable measurement model fit, as well as an acceptable explanation of the observed covariance matrix.

The completely standardised LAMBDA-X matrix for the OCBS is indicated in Table 4.27. Evaluating the OCBS output, the completely standardised factor loading matrix indicates some concerns as 8 out of 24 items loaded below the cut-off value of 0.50. Lower factor loadings for the OCBS are expected, given the broad nature of the OCBS dimensions and the fact that the responses to individual items in the OCBS are determined by the whole spectrum of helpful behaviour. However, it was found that all the items of the OCBS significantly (t values ≥ |1.96) represent the subscales they were designed to measure by showing reasonably acceptable loadings (> 0.30).

Table 4.27

Completely standardised LAMBDA-X matrix for the OCBS

LAMBDA-X

	CIVIC	COURT	CONSC	ALTR	SPORTS
OCB1	- -	- -	- -	0.563	- -
OCB3	- -	- -	0.715	- -	- -
OCB4	- -	0.624	- -	- -	- -
OCB6	0.582	- -	- -	- -	- -
OCB8	- -	0.447	- -	- -	- -
OCB9	0.341	- -	- -	- -	- -
OCB10	- -	- -	- -	0.790	- -
OCB11	0.508	- -	- -	- -	- -
OCB12	0.747	- -	- -	- -	- -
OCB13	- -	- -	- -	0.453	- -
OCB14	- -	0.696	- -	- -	- -
OCB15	- -	- -	- -	0.714	- -
OCB17	- -	0.676	- -	- -	- -
OCB18	- -	- -	0.532	- -	- -
OCB20	- -	0.488	- -	- -	- -
OCB21	- -	- -	0.413	- -	- -
OCB22	- -	- -	0.633	- -	- -
OCB23	- -	- -	- -	0.502	- -
OCB24	- -	- -	0.634	- -	- -
OCBR5	- -	- -	- -	- -	0.818
OCBR16	- -	- -	- -	- -	0.384
OCBR7	- -	- -	- -	- -	0.643
OCBR19	- -	- -	- -	- -	0.492
OCBR2	- -	- -	- -	- -	0.428

Table 4.28

Fit indices for the measurement models for the four measurement scales

Indices	EIT	MCI	ALI	OCBS
Absolute fit measures				
Satorra-Bentler Scaled Chi-square	4154.876 (p<0.05)	644.095 (p<0.05)	131.282 p<0.05)	71.782 (p<0.05)
Degrees of freedom (df)	2069	349	98	242
χ2/df	2.008	1.846	1.340	1.950
Root Mean Square Error of Approximation (RMSEA)	0.0594	0.0544	0.0345	0.0576
P-Value for Test of Close Fit (RMSEA < 0.05)	0.000	0.135	0.962	0.0531
Root Mean Square Residual (RMR)	0.0552	0.0438	0.0314	0.0759
Standardised RMR	0.0389	0.0299	0.0222	0.0791
Goodness-of-Fit Index (GFI)	0.612	0.798	0.909	0.858
Incremental fit measures				
Normed Fit Index (NFI)	0.982	0.989	0.992	0.920
Non-Normed Fit Index (NNFI)	0.990	0.994	0.998	0.953
Comparative Fit Index (CFI)	0.991	0.995	0.998	0.959
Incremental Fit Index (IFI)	0.991	0.995	0.998	0.959
Relative Fit Index (RFI)	0.981	0.987	0.991	0.908

4.14 FITTING THE OVERALL MEASUREMENT MODEL

The initial measurement model for overall fit proved unsatisfactory with a P-value for Close fit of 0.000 and a RMSEA value of 0.141, indicating poor model fit. In addition, the OCB scale reflected negative values (< 0.50) on the completely standardised LAMBDA-X. Because the initial measurement model failed to obtain a good fit, a decision was made to make use of item parcelling. Thus, all the scales utilised in this study were subjected to item parcelling in accordance with their respective subscales, excepting the OCB scale where random parcelling was used.

The revised overall measurement model obtained a RMSEA value of 0.068, with a P-value for Test of Close fit of 0.001, which suggests that the null hypothesis for close fit should not be

accepted. However, based on the RMSEA value, it can be accepted that the model obtained a reasonable fit (Brown, 2006; Diamantopoulos & Sigauw, 2000; Hu & Bentler, 1999).

The RMR value of .0131 and the standardised RMR value of 0.0150 indicated good model fit (< 0.05). A GFI value of 0.864 was obtained, which marginally missed the cut-off value for good fit (> 0.90). A good χ2/df ratio of 2.324 was obtained, which indicates good model fit as it is within the range for acceptable fit (2 – 5).

The results of the incremental fit indices (NFI, NNFI, CFI, IFI and RFI) indicated that all values were above 0.90, which is an indication of good fit.

Examination of the overall revised measurement model revealed reasonable fit, thus it can be concluded that the goodness-of-fit indices provides a credible explanation of the observed covariance matrix (Brown, 2006; Diamantopoulos & Sigauw, 2000; Hair et al., 1998; Hair et al., 2006; Hu & Bentler, 1999). A summary of the revised overall measurement model with fit indices can be seen in Table 4.29.

Table 4.29

Fit indices for the overall revised measurement model

Indices	
Absolute fit measures	
Satorra-Bentler Scaled Chi-square	339.234
Degrees of freedom (df)	146
χ2/df	2.324
Root Mean Square Error of Approximation (RMSEA)	0.0680
P-Value for Test of Close Fit (RMSEA < 0.05)	0.001
Root Mean Square Residual (RMR)	0.0131
Standard RMR	0.0150
Goodness-of-Fit Index (GFI)	0.864
Incremental fit measures	
Normed Fit Index (NFI)	0.988
Non-Normed Fit Index (NNFI)	0.992
Comparative Fit Index (CFI)	0.993
Incremental Fit Index (IFI)	0.993
Relative Fit Index (RFI)	0.986

4.15 EVALUATING THE STRUCTURAL MODEL

The purpose of the structural model is to establish if there is a connection between the investigated endogenous and exogenous variables. Thus, the main aim of a structural model is to establish whether the conceptualised relationships as stipulated in Chapter 2 of this study are supported by the statistical data (Diamantopoulos & Sigauw, 2000; Hair et al., 2006; Tabachnick & Fidell, 2001). Table 4.30 indicates the goodness-of-fit-statistics for the structural model.

A value of 341.036 was obtained for the Satorra-Bentler Scaled Chi-Square, which indicated that the null hypothesis of exact fit could not be accepted ($p<0.01$). However, the RMSEA is regarded as a significant value to consider for model fit evaluation. Diamantopoulos and Siguaw (2000) hold the view that RMSEA values that are smaller than 0.05 indicate good fit, values below 0.08 indicate reasonable fit, while those above 0.08 are of poor fit. For this model, the RMSEA value that was obtained was 0.0679, which indicates acceptable fit. The P-value for Test of Close fit (0.001), indicates that the null hypothesis for close fit should be rejected. Despite the significant P-value it could be concluded that the model presented an acceptable fit based on the RMSEA.

The $\chi 2/df$ ratio was calculated through dividing the value of the Satorra-Bentler Scaled Chi-Square (341.036) by the degrees of freedom (147). Thus, the $\chi 2/df$ ratio of 2.320 was obtained, indicating good model fit (2 - 5). For the structural model, the RMR value was found to be 0.0131 and the standardised RMR was 0.0152, which indicated good model fit since the cut-off value should be < 0.05 (Kelloway, 1998).

The goodness-of-fit index should range from 0 to 1, with values above 0.90 indicating a good model fit. The GFI (0.864) for this model marginally missed the recommended value (> 0.90). Results of the incremental fit indices indicated that the structural model achieved NFI (0.988), NNFI (0.992), CFI (0.993), IFI (0.993) and RFI (0.986) values, which are all above 0.90, indicating good model fit. These comparative indices therefore appeared to reveal an affirmative picture of model fit (Hair et al., 1998; Hair et al., 2006; Tabachnick & Fidell, 2001).
Overall, the examination of the goodness-of-statistics resulted in the conclusion that the structural model fits the data reasonably well, therefore the structural model displays a

reasonably good model fit. Table 4.30 depicts the overall goodness-of-fit statistics for the structural model.

Table 4.30

Fit statistics for the structural model

Goodness of Fit Statistics
Degrees of Freedom = 147
Minimum Fit Function Chi-Square = 411.848 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 428.969 (P = 0.0)
Satorra-Bentler Scaled Chi-Square = 341.036 (P = 0.0)
Chi-Square Corrected for Non-Normality = 467.312 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 194.036
90 Percent Confidence Interval for NCP = (144.041 ; 251.747)
Minimum Fit Function Value = 1.440
Population Discrepancy Function Value (F0) = 0.678
90 Percent Confidence Interval for F0 = (0.504 ; 0.880)
Root Mean Square Error of Approximation (RMSEA) = 0.0679
90 Percent Confidence Interval for RMSEA = (0.0585 ; 0.0774)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00111
Expected Cross-Validation Index (ECVI) = 1.493
90 Percent Confidence Interval for ECVI = (1.318 ; 1.695)
ECVI for Saturated Model = 1.329
ECVI for Independence Model = 102.574
Chi-Square for Independence Model with 171 Degrees of Freedom = 29298.115
Independence AIC = 29336.115
Model AIC = 427.036
Saturated AIC = 380.000
Independence CAIC = 29424.645
Model CAIC = 627.394
Saturated CAIC = 1265.302
Normed Fit Index (NFI) = 0.988
Non-Normed Fit Index (NNFI) = 0.992
Parsimony Normed Fit Index (PNFI) = 0.850
Comparative Fit Index (CFI) = 0.993
Incremental Fit Index (IFI) = 0.993
Relative Fit Index (RFI) = 0.986
Critical N (CN) = 160.172

Root Mean Square Residual (RMR) = 0.0131 Standardized RMR = 0.0152
Goodness of Fit Index (GFI) = 0.864
Adjusted Goodness of Fit Index (AGFI) = 0.824
Parsimony Goodness of Fit Index (PGFI) = 0.668

4.16 RELATIONSHIPS BETWEEN VARIABLES

After establishing that the structural model fits the data reasonably well, as indicated by the results of the Goodness-of-Fit Statistics, the next step was to test the relationships between the endogenous and exogenous latent variables. This was done in order to assess whether the linkages as postulated at the theoretical phase, were in fact supported by the data (Diamantopoulos & Sigauw, 2000; Tabachnick & Fidell, 2001).

Three issues should be observed in order to validly assess these relationships. The first issue requires the researcher to examine signs of the parameters representing the paths between the latent variables in order to determine whether the direction of the hypothesised relationships is the same as obtained. The second issue involves investigating the magnitudes of the estimated parameters as this provides an invaluable report regarding the strength of these relationships. Finally, the squared multiple correlations (R^2) indicate the amount of variance in the endogenous variables that is explained by the related latent variables (Diamantopoulos & Sigauw, 2000).

The freed elements of the gamma (Γ***)*** and beta (β) matrices include the parameters necessary to be assessed in this regard. To evaluate the strength of the estimated path coefficients γij (which express the significance of the influence of ξj on ηi) we made use of the unstandardised gamma matrix. These unstandardised γij estimates are considered significant if t > |1.644| (Diamantopoulos & Sigauw, 2000). A significant γ estimate would entail that the related Ho-hypothesis should be rejected in favour of the relevant Ha-hypothesis.

Table 4.31

Unstandardised GAMMA (Γ) Matrix

	INTEGRITY
OCB	-0.078 (0.121) **-0.645**
Authentic Leadership	0.121 (0.099) **1.221**
Moral Intelligence	0.953 (0.045) **21.410**

Table 4.31 presents the unstandardised gamma matrix, with Integrity as the only exogenous latent variable; this means Hypotheses 4, 6 and 7 are the only hypotheses relevant to the gamma matrix. To interpret the gamma matrix, the focus will be on the t-value (bolded value), which is the value that provides information regarding the relationship between the endogenous and exogenous latent variables. Based on the values of the gamma matrix in Table 4.31, it can be concluded that a non-significant relationship (t-value = -0.645) was found between integrity (ξ_1) and OCB (η_3). Thus, alternative Hypothesis 4 (Ha_4: $\gamma_{31} > 0$) could not be accepted in favour of null Hypothesis 4 (H_{04}: $\gamma_{31} = 0$), which indicated that the proposed positive relationship between these variables cannot be supported.

Table 4.31 further indicates that a non-significant relationship (t-value = 1.221) exists between integrity (ξ_1) and authentic leadership (η_2). Thus, there was no support for a direct effect of integrity on authentic leadership as postulated by Hypothesis 6. In this case, alternative Hypothesis 6 (Ha_6: $\gamma_{21} > 0$) could be rejected in favour of null Hypothesis 6 (H_{06}: $\gamma_{21} = 0$).

The values in the matrix (Table 4.31) indicate that there is a positive significant relationship between integrity (ξ_1) and moral intelligence (η_1) because the t-value (21.410) is above 1.644. Thus, null Hypothesis 7 (H_{07}: $\gamma_{11} = 0$) can be rejected in favour of alternative Hypothesis 7 (Ha_7: $\gamma_{11} > 0$), which indicates that the proposed relationship between the two variables was supported.

Table 4.32

Unstandardised BETA (B) Matrix

	Authentic Leadership	Moral Intelligence
OCB	0.389 (0.132) **2.943**	- -
Authentic Leadership	- -	0.814 (0.098) **8.294**

Table 4.32 presents the unstandardised BETA Matrix, which describes the hypothesised relationships between the endogenous variables in the structural model (Diamantopoulos & Sigauw, 2000; Tabachnick & Fidell, 2001). The unstandardised BETA estimates are also significant ($p < 0.05$) if $t > |1.644|$. Relevant hypotheses for the BETA matrix include Hypotheses 3 and 5. As indicated in Table 4.32, there is a significant relationship (2.943) between authentic leadership (η_2) and OCB (η_3), as the t-value is above 1.644. Therefore, null Hypothesis 3 (Ho3: $\beta_{32} = 0$) is rejected in favour of alternative Hypothesis 3 (Ha3: $\beta_{32} > 0$), which indicates that the suggested relationship between the two variables was supported.

Judging from the t-value of 8.294 (as indicated in Table 4.32), which is above the required 1.96, the null Hypothesis 5 (Ho5: $\beta_{21} = 0$) could be rejected in favour of alternative Hypothesis 5 (Ha5: $\beta_{21} > 0$). Thus, it could be concluded that a significant positive relationship exists between moral intelligence (η_1) and authentic leadership (η_2).

4.17 STRUCTURAL MODEL MODIFICATION INDICES

The modification indices are also investigated in order to determine the extent to which the structural model is successful in explaining the observed covariance's amongst the apparent variables. A modification index (MI) indicates a minimum decrease in the model's chi-square, if a previously fixed parameter is set free and the model is re-estimated. This means that a modification index for a particular fixed parameter indicates that, if this parameter were allowed to be freed in a subsequent model, the chi-square goodness-of-fit value would be predicted to decrease by at least the value of the index. Large modification index values (> 6.64) would be indicative of parameters that, if set free, would potentially improve the fit of the model ($p < 0.01$).

However, one should take note of the fact that any adjustment to the model, as suggested by parameters with high MI values, should only be freed if it makes theoretical sense to do so (Diamantopoulos & Sigauw, 2000; Jöreskog & Sörbom, 1993).

The standardised expected changes are the expected values in the standardised solution if the parameters were freed. In this case, the proposed structural model appears to fit the data reasonably well. Inspection of the modification indices for the beta or gamma matrix indicates that there are no additional paths between any latent variables that would significantly improve the fit of the proposed structural model.

4.18 SUMMARY

The purpose of Chapter four was to report on the statistical analysis results obtained from this study. This chapter commenced with an investigation of the measuring scales that were utilised. Furthermore, the hypothesised relationships were subjected to relevant statistical analysis, which determined the statistical outcomes of the relationships. The following chapter will discuss in greater depth the general conclusions drawn from the results, recommendations for future research and possible managerial implications will be presented in conclusion.

CHAPTER 5
DISCUSSION OF RESULTS, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 INTRODUCTION

Following a comprehensive discussion of the constructs of authentic leadership, integrity, moral intelligence and organisational citizenship behaviour in Chapter 2, the subsequent chapter (Chapter 3) followed with an explanation of the techniques that were used to analyse the data and produce results. Chapter 4 details a thorough explanation of the results obtained from the data analysis. In addition to the empirical findings presented in Chapter 4, the current chapter identifies the specific meaningfulness and implications of the findings.

In summary, this chapter comprises an explanation of the findings obtained from the data analysis process; the managerial implications accompanying this research; the limitations encountered during this study; and suggestions for future research.

5.2 OBJECTIVE OF THE STUDY

Initially, the purpose of this study was to investigate the influence of integrity and moral intelligence on authentic leadership and OCB. The importance of having employees who engage in OCB is increasingly highlighted in the literature and emphasis is placed on the implied benefits for the employees and the organisation. Leader/organisational trust, Leader-member Exchange (LMX), Team-member Exchange (TMX), high employee performance, justice, integrity, commitment and generalised compliance are regarded as behaviours enhanced by OCB (Organ, 1988; Organ, 1997).

Employees working for organisations that encourage and value OCB are noted to also place high value on reciprocal exchange as they view their efforts as being well recognised and acknowledged. As a result, such organisations have high success rates. Employees who are led by moral leaders are more likely to engage in helping behaviour. As such, they tend to display behaviour associated with OCB (Titrek et al., 2014; Turnipseed & Wilson, 2009). It is clear that employee OCB can lead to invaluable positive outcomes for organisations when combined with

morally-based leadership, like authentic leadership. Thus, it was the purpose of this study to provide information on the extent to which leader integrity and moral intelligence influence authentic leadership and OCB.

To empirically evaluate the objective of this study, five substantive hypotheses were inferred from the literature study presented in Chapter 2. The results of these hypotheses are discussed in terms of the findings obtained through the data analysis process presented in Chapter 4.

5.3 SUMMARY OF THE FINDINGS

The research objectives of this study initially were aimed at ensuring that the measurement scales utilised in the study assessed the hypothesised relationships by looking at the construct validity and internal reliability of the relevant measurement scales. Thus, the four measurement scales were subjected to item analysis, CFA and hypothesis testing. These statistical processes were performed in order to establish internal reliability and factorial validity, as well as to establish whether the measurement models displayed acceptable fit with the data. This statistical analysis process is discussed in detail in Chapter 3, whereas the results thereof are reported in Chapter 4. The findings are discussed in this chapter (Chapter 5).

5.4 CONCLUSIONS REGARDING THE RELIABILITY ANALYSIS

The reliability coefficients of all the measurement scales were determined to confirm that each of the items from the various scales succeeded in contributing to an internally consistent description of the specific scale in question. According to Nunnally (1978), only instruments with modest reliability can be used to gather information to test hypotheses. Reliabilities were indicated by Cronbach's alpha and values greater than .6 were regarded as acceptable (Malhotra, 2004). Item-total correlations of above 0.30 were also considered indicators of internal consistency (Pallant, 2007).

Following the guidelines described above, the results obtained were indicated to be satisfactory for the reliability analyses according to which all the subscales ranged above the recommended cut-off value (.6) for the Cronbach's alpha. In addition, the results indicated that all subscale items presented an Item-Total correlation above the recommended cut-off value of 0.30. Thus,

the measure subscales did not raise any concerns; consequently, no items were removed during the item analysis phase. Table 5.1 provides a summary of the final reliability results for each measuring scale.

Regarding the Sportsmanship items in the full (total) OCB scale, it was found that only one item (OCB7) produced an acceptable (> 0.20; Nunnally, 1978) item-total correlation (.265), while all the other Sportsmanship items achieved unacceptable item-total correlations (< 0.20). It is clear that the Sportsmanship subscale produced some poor items that shed a dark light on the reliability of the total OCB scale. This limitation of the Sportsmanship subscale should be taken into consideration in further analyses of the data.

Table 5.1

Reliability results for the measurement scales

Scale	No. of items	Item-Total Correlation	Cronbach's alpha
Ethical Integrity (EIT) (Total scale)	66	.547-.869	.990
Ethical Integrity (EIT) (Subscales)	10-15	.521-.861	.942 - .961
Moral Intelligence (MCI) (Total scale)	29	.620-.898	.986
Moral Intelligence (MCI) (Subscales)	2-4	.623-.770	.860-.927
Authentic leadership (ALI) (Total scale)	16	.765-.884	.977
Authentic leadership (ALI) (Subscales)	4	.729-.845	.901-.924
Organisational Citizenship Behaviour (OCBS) (Total scale)	24	-.027-.640	.816
Organisational Citizenship Behaviour (OCBS) (Subscales)	4-5	.339-.612	.642-.724

5.5 CONCLUSIONS REGARDING MEASUREMENT MODEL FIT (CFA)

The four measurement scales utilised in this study (EIT, MCI, ALI & OCBS) were subjected to measurement model fit, in order to determine the extent to which the indicator variables operationalise the latent variables (Diamantopoulos & Sigauw, 2000). To assess measurement model fit, all the scales with their related subscales were individually subjected to CFA.

The section that follows presents summarised results of goodness-of-fit indices obtained from the CFA performed on each measurement scale.

5.5.1 Absolute and incremental fit results

Regarding the fit indices of the Ethical Integrity Test (EIT), as presented in Table 4.28, the χ2/df ratio (2.008) indicated good fit as it fell within the acceptable range (2 - 5). The RMSEA value of .0594 indicated an acceptable fit. However, the EIT failed to obtain a P-value for the Test of Close Fit (0.000), which suggests that the null hypothesis of close fit should be rejected, since the value obtained is below 0.05. Although the obtained ratio for the P-value Test of Close fit is somewhat disappointing, it could be concluded that the measurement model did obtain an acceptable fit based on the RMSEA value. The RMR value of 0.0552 indicated acceptable fit (< 0.08) and the Standardised RMR value of 0.0389 indicated good fit (< 0.05). A GFI value of 0.612 was obtained, which partially missed the cut-off value for good fit (0.90). The measurement model managed to achieve NFI, NNFI, CFI, IFI and RFI indices of above 0.90, which is indicative of good comparative model fit. It can therefore be said that the measurement model fitted the data well and provided a credible explanation of the observed covariance matrix.

The Moral Competency Inventory (MCI) achieved acceptable fit, with a RMSEA value of 0.0544 and a P-value for Test of Close Fit of 0.135. These values indicate acceptable fit, thus the null hypothesis of close fit cannot be rejected. The RMR value of 0.0438 and the Standardised RMR value of 0.0299 showed good fit, as they were both within the range of good fit (values obtained were below 0.05). A GFI value of 0.798 and a χ2/df value of 1.846 were obtained, which marginally missed the cut-off value for good fit, where GFI values close to 1 (> 0.90) indicate good fit and χ2/df values ranging between 2 and 5 indicate acceptable fit. However, the results of the incremental fit indices were all above 0.90, which indicated that the MCI achieved good comparative model fit.

In terms of the absolute fit indices of the Authentic Leadership Inventory (ALI), as presented in Table 4.28, the χ2/df value (1.340) missed the cut-off range (2-5) indicative of acceptable fit. In terms of the P-value for test of Close Fit (RMSEA < 0.05), the ALI obtained a value indicating a good fit (0.0962). The RMR of 0.0314, together with the Standardised RMR of 0.0222, showed

good fit, as they were below 0.05. A GFI value of 0.909 was obtained, which indicate good fit. The incremental fit indices exceeded the critical value of 0.90. Therefore, the ALI was able to reject the null hypothesis of exact fit (Ho: $\Sigma = \Sigma(\theta)$ for the alternative hypothesis of close fit (Ho: RMSEA ≤ 0.05). Thus, the results indicate that the measurement model fitted the data well, as the model could reproduce the observed sample covariance matrix and provide a credible explanation of the observed covariance matrix.

In terms of the absolute fit indices of the Organisational Citizenship Behaviour Scale (OCBS) as reported in Table 4.28, the $\chi 2/df$ value (1.950) marginally missed the cut-off range (2-5) indicative of acceptable fit. In terms of the P-value for test of Close Fit (RMSEA < 0.05), the OCBS obtained 0.0531, indicating reasonable fit. The RMR of 0.0759 and Standardised RMR of 0.0791 ratio was above the acceptable value of < 0.05. The GFI (0.858) marginally missed the cut-off value for good fit (> 0.90). The results of the incremental fit indices were all above 0.90, which indicated that the OCBS achieved good model fit. The OCBS was therefore able to reject the null hypothesis of exact fit (Ho: $\Sigma = \Sigma(\theta)$ for the alternative hypothesis of close fit (Ho: RMSEA ≤ 0.05). These results indicate that the measurement model fitted the data well, as the model could reproduce the observed sample covariance matrix and provide a credible explanation of the observed covariance matrix.

Based on the above, it can be concluded that the results of the measurement models for the individual scales provided reasonable measurement model fit, as well as an acceptable explanation of the observed covariance matrix.

5.5.2 The goodness-of-fit results for the overall measurement model

After subjecting each scale to CFA it was decided to simultaneously subject all four scales to CFA in order to determine the overall measurement model fit. The initial measurement model (on item data) for overall fit proved unsatisfactory, with a P-value for Close fit of 0.000 and a RMSEA value of 0.141, indicating poor model fit. In addition, the OCB scale reflected negative values (< 0.50) on the completely standardised LAMBDA-X. Based in these findings, a decision was made to make use of item parcelling, whereby all the scales with their respective subscales were subjected to item parcelling. However, the OCBS (the scale that produced insignificant completely standardised factor loadings) was subjected to random parcelling.

The results of the revised overall measurement model, as presented in Table 4.29, indicate good model fit with the χ2/df ratio of 2.324, this value falls within the range for acceptable fit (2-5). In addition, the P-value for test of Close Fit (RMSEA < 0.05), obtained a value of 0.001 indicating that the null hypothesis for close fit should not be accepted. However, the RMSEA (0.068) indicated acceptable model fit. The RMR of 0.0131 and the Standardised RMR of 0.0150 indicated good model fit (< 0.05). A GFI value of 0.864 was obtained, which marginally missed the cut-off value for good fit (> 0.90). However, the measurement model obtained NFI, NNFI, CFI, IFI and RFI (> 0.90). The revised overall measurement model therefore was able to reject the null hypothesis of exact fit (Ho: $\Sigma = \Sigma(\theta)$ and accept the alternative hypothesis of close fit (Ho: RMSEA ≤ 0.05). In conclusion, the overall revised measurement model fitted the data reasonably well, as it could reproduce the observed sample covariance matrices and provide a credible explanation of the observed covariance matrices.

5.6 CONCLUSIONS REGARDING STRUCTURAL MODEL FIT

After confirming that all the measuring instruments utilised in this study were regarded as both construct valid and internally reliable, the data obtained were analysed further to test the fit of the structural model and the direct relationships between the various latent variables. In addition, the data were also analysed with the use of Structural Equation Modelling (SEM) to determine the significance of the hypothesised paths in the model.

The research objective of this study was to explain the relationships between integrity, moral intelligence, authentic leadership and organisational citizenship behaviour. The goodness-of-fit indices for the structural model are presented in Table 4.30. A comprehensive assessment of all the fit indices led to the conclusion that the structural model for this study fitted the data reasonably well. Firstly, the χ2/df of 2.320, suggested that the model showed good fit (2 – 5). The RMSEA value for the structural model resulted in 0.0679, indicating reasonable fit, according to Diamantopoulos and Siguaw (2000). Therefore, in spite of the significant P-value for Test of Close fit (p = 0.001), which indicated that the null hypothesis of close fit could not be accepted, the model still presented reasonable fit based on the RMSEA value.

The RMR resulted in 0.0131, with the standardised RMR indicating a value of 0.0152. Kelloway (1998) is of the opinion that low values indicate good model fit. Results of the incremental fit

indices resulted in a NFI, NNFI, CFI, IFI and RFI of above 0.90, which indicated good comparative fit relative to the independence model.

To ensure a thorough assessment of the structural model, the modification indices were examined to understand the extent to which the model explained the observed covariances among the latent variables. Examination of the modification indices suggested that there were no additional paths between any latent variables that would significantly improve the fit of the proposed structural model. These results therefore indicated that the structural model was successful to the extent that it explained the observed covariances among the apparent variables.

5.7 CONCLUSIONS REGARDING THE HYPOTHESISED RELATIONSHIPS

To establish the significance of the conceptual linkages proposed by the structural model, as illustrated in Figure 3.1, an examination of the gamma and beta matrices was conducted. Interpretation of these results provided information with which to determine whether the theoretical relationships specified at the conceptualisation stage were in fact supported by the data. Here the interpretation concerns the proposed causal linkages between the various endogenous and exogenous latent variables. A discussion regarding the interpretation of these results follows henceforth.

5.7.1 The Gamma matrix

The unstandardised gamma matrix was analysed and reported in order to describe the relationships between the exogenous and endogenous variables and to evaluate the strength of the estimated path coefficients. Table 4.31 presents results for the unstandardised gamma matrix.

5.7.1.1 The relationship between integrity and OCB

It was postulated that a positive relationship exists between integrity (ξ_1) and OCB (η_3). Results obtained through SEM statistical analysis indicated a non-significant path between the two

constructs. This meant that the null hypothesis could not be rejected, and no support was found for the hypothesised direct relationship between integrity and OCB. Therefore, it appears as if integrity does not have a direct influence on OCB. This finding is contradictory to studies in which a significant positive relationship was found between leader integrity and employee OCB (Avolio & Gardner, 2005; Dineen et al., 2006; Eisenberg, 2000; Simons et al., 2015; Walumbwa et al., 2008).

Although these studies have shown a positive relationship between integrity and OCB, it is not surprising that these variables indicate a non-significant relationship in this study. This is based on the deduction that OCB and associated behaviours may not necessarily be encouraged in the military context. Thus, it is important to note that the military is a unique environment, as such subordinates in the military react and respond well to direct orders and instructions (lower ranking members, especially) compared to initiative, which, at times, might be considered an unwelcome act of insubordination.

Research on the influence of leader integrity and employee OCB conducted by Zhang et al. (2014) also confirmed a link between integrity and OCB. However, the relationship between leader-integrity and employee OCB was significant among less traditional subordinates and insignificant among the more traditional subordinates. Leaders who work in traditional organisations that are rated high on structure and work-roles (like the military), these leaders expect their subordinates to focus on work assigned to them only and not that of others.

Based on this finding, the deduction is that employees who are more traditional and also work for organisations high on tradition are conditioned to focus on their own work only and not that of colleagues. This behaviour limits the possibility of employees high on tradition to engage in OCB. As a result, it can be concluded that integrity has an insignificant effect on OCB in traditional work contexts such as the military. It can thus be said that integrity could have an indirect effect on OCB through moral intelligence and authentic leadership regarding the SANDF sample.

5.7.1.2 The relationship between integrity and authentic leadership

A positive relationship between integrity (ξ_1) and authentic leadership (η_2) was hypothesised in this study. However, the SEM analysis revealed that a non-significant relationship exists between integrity and authentic leadership. This means the null hypothesis had to be accepted as there was no support for the hypothesised direct relationship between integrity and authentic leadership. It would therefore seem that integrity and authentic leadership could have an indirect relationship.

Authentic leadership forms part of the value-based and morally embedded leadership styles. As such, authentic leaders tend to lead with a clear and transparent sense of purpose and direction. These leaders have strong regard for their internal values, principles and beliefs. In addition, authentic leaders have a heightened sense of integrity; they consequently are generally known as leaders who place high value on integrity (Northhouse, 2013; Shamir & Eilam, 2005).

In support of the above, previous studies found that leader integrity behaviour was significantly related to authentic leadership (Cottrill et al., 2014; Hannes et al., 2012; Kannan-Narasimhan & Lawrence, 2012). It is clear from these findings that integrity and authentic leadership have a strong positive link. Contrary to these studies, a direct link between integrity and authentic leadership was not confirmed in the current study, with the SANDF as the sample. It could thus be concluded that integrity could have an indirect influence on authentic leadership through moral intelligence.

5.7.1.3 The relationship between integrity and moral intelligence

The hypothesised relationship between integrity (ξ_1) and moral intelligence (η_1) was confirmed in this study. The SEM results indicated the path between these two variables was significant. Consequently, the null hypothesis was rejected, which led to the conclusion that a positive significant relationship between integrity and moral intelligence was established. This finding corroborates the opinion held by Lennick and Kiel (2005, 2006, 2011), in that integrity is embedded in the construct of moral intelligence. As such, integrity forms part of the competencies of moral intelligence. From this, it may be concluded that leaders with moral

intelligence value integrity. The two constructs thus cannot be separated, as leaders with integrity consult their internal moral principles to guide their thoughts, decisions and actions (Borba, 2001; Lennick & Kiel, 2005, 2006, 2011).

Integrity is the quality of moral self-governance, which is self-governance based on internal moral standards. Leaders who genuinely display integrity are therefore perceived as highly ethical and moral people. The same may be said about leaders with moral intelligence. These findings further serve to substantiate the empirical findings regarding the positive relationship between leader integrity and morality (Killinger, 2010; Lennick & Kiel, 2005, 2011; Pallanski & Yammarino, 2007, 2009; Six et al., 2007).

5.7.2 The Beta matrix

The unstandardised beta (β) matrix, as presented in Table 4.32, was used to assess the hypothesised relationships between the endogenous variables in the structural model. The beta matrix reflects the slope of the regression of ηi and ηj.

5.7.2.1 The relationship between authentic leadership and OCB

The hypothesised relationship between authentic leadership (η_2) and OCB (η_3) was confirmed in this study. The SEM results indicated a significant path between these two latent variables. Thus, the null hypothesis was rejected in favour of the alternative hypothesis. It was therefore concluded that a positive relationship exists between authentic leadership and OCB.

Authentic leadership is regarded as a form of morally based leadership style, hence authentic leaders are known as leaders who uphold positive psychological capacities and a positive ethical climate. These leaders are known to maintain a strong stance on the promotion of self-awareness, internalised morals, balanced information processing, and transparency between themselves and their followers. Authentic leaders thus are regarded as leaders who are true to themselves. They (authentic leaders) achieve this by displaying consistency in their words, behaviour and actions (Avolio et al., 2004; Avolio et al., 2005; Clapp-Smith et al., 2009; Gardner et al., 2005; Northhouse, 2013; Walumbwa et al., 2008; Walumbwa et al., 2010; Yukl, 2013).

Like other forms of leadership (ethical, transformational, servant), authentic leaders hold a different view regarding the process of inspiring followers' beliefs and values. These leaders do not believe in enticing followers through the use of resources or any form of tangible benefits, but are more focused on internal employee inspiration. As a result, authentic leaders inspire their followers by showing their genuine morality, dedication, and openness (Bennis, 2003; Ilies et al., 2005; Valsania et al., 2012; Walumbwa et al., 2008). Such transparency of authentic leaders has been noted to contribute immensely to effectiveness in organisations. In addition to organisational benefits, authentic leaders also inspire positive employee behaviour including organisational commitment, trust, team cooperation, productivity, leader-member exchange, team-member exchange and OCB (Chowdhury, 2015; Chun et al., 2013; Rego et al., 2012; Walumbwa et al., 2008; Walumbwa et al., 2010; Williams & Anderson, 1991).

Chowdhury (2015), Chun et al. (2013) and Williams and Anderson (1991) are of the opinion that followers are more likely to engage in helpful behaviours when they believe that their leader is ethical, honest, committed and fair in the execution of his/her work. Although such helpful behaviours may be inspired by the leader, they are usually not directed at individuals (individual team members or leader) (OCB-I) only, but may also be directed at the organisation (OCB-O).

A study by Peus et al. (2012) found that authentic leadership had a positive effect on employees' OCB. Peus et al. found that the authentic leader's relational transparency affected employees' willingness to engage in OCB-I. Employee OCB-O, on the other hand, was affected by the authentic leader's moral perspective and relational transparency. Other studies (Gardner et al., 2005; Ilies et al., 2005; Organ, 1997; Wong & Cummings, 2009) found that ethically based leadership styles, like authentic leadership, inspire acts of OCB and related helpful behaviours among employees.

The current study concurred with previous findings regarding the strong influence of authentic leadership on OCB. Therefore, it could be concluded that authentic leadership has a significant positive influence on employee OCB.

5.7.2.2 The relationship between moral intelligence and authentic leadership

The final hypothesised relationship between moral intelligence ($\eta 1$) and authentic leadership ($\eta 2$) was confirmed as significant through SEM analysis. As a result, the null hypothesis was

rejected, thereby concluding the existence of a significant positive relationship between moral intelligence and authentic leadership.

Authentic leadership is regarded as a morally based leadership style that embraces the importance of adhering to good moral standards and principles. Authentic leaders have a great sense of self-awareness regarding their thoughts and actions, they are considered as having awareness of their and others' values, knowledge, strengths and weaknesses. Most important, these leaders have a strong internalised moral perspective and balanced processing, which means that authentic leaders are true to themselves in showing integrity, honesty and objectivity in their thoughts, decisions and actions. This behaviour is applied persistently in various situations (Avolio et al., 2004; Walumbwa et al., 2008; Walumbwa et al., 2010).

In addition, authentic leaders do not believe in enticing their followers with extrinsic rewards; they are more focused on internal employee motivation. As a result, authentic leaders inspire their followers by showing their genuine morality, which makes a clear distinction between right and wrong (Ilies et al., 2005; Valsania et al., 2012; Walumbwa et al., 2008; Walumbwa et al., 2010).

Moral intelligence, on the other hand, also involves the understanding of right against wrong and having strong ethical convictions on which one acts in a right and honourable manner (Clarken, 2009). Authentic leaders are leaders with high moral intelligence; as a result, they also display positive traits including: integrity (may be linked to an authentic leader's internalised moral perspective), responsibility (may be linked to an authentic leader's rational transparency), fairness, logic and consistency (may be linked to an authentic leader's balanced processing).

Therefore, it is clear that authentic leaders are leaders who value the distinction between right and wrong and also adhere to their internal principles in line with universal values (Avolio & Gardner, 2005; Luthans & Avolio, 2003; Walumbwa et al., 2008). The same can be said about moral intelligence, because the term moral intelligence can be used to describe the ability to distinguish right from wrong as defined by universal principles (Borba, 2001; Clarken, 2009; Lennick & Kiel, 2005). Thus, it can be said that authentic leaders are guided by moral principles; as such they apply moral intelligence in their leadership (Walumbwa et al., 2008; Walumbwa et al., 2010).

Over the years, studies have shown that leader moral intelligence has a positive effect on organisational performance (May et al., 2003; Waskithol et al., as cited in Beheshtifr et al., 2011). In addition, moral intelligence is highly associated with leadership effectiveness, and authentic leaders are considered effective leaders (Clarken, 2009; Rahim, 2011). A study by Sendjaya et al., (2016) also revealed that the influence of authentic leadership on the leader's moral action was significant and positive. Thus, the finding of a positive relationship between moral intelligence and authentic leadership, as confirmed in this study, contributes to similar findings by various researchers.

5.8 LIMITATIONS OF THIS STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH

Although this study provides invaluable insight regarding the importance of integrity, moral intelligence, authentic leadership and OCB, some limitations need to be considered for the purpose of providing guidance to improve future research.

The first and serious limitation for the South African National Defence Force (SANDF) sample which revealed itself during the study was the insignificant relationship (path coefficient) between integrity and OCB, as well as between integrity and authentic leadership. It is recommended that future research investigate this by evaluating whether the same conclusion can be reached when assessing SANDF units in other provinces, as well as other defence forces in Africa and internationally.

Secondly, this study was mainly concerned with the perceptions of the employees regarding their direct leaders. This study therefore concentrated on a single source and attention was not given to other sources. Future studies should consider the use of self-reports, peer reviews and subordinates' reviews. In general, a 360-degree evaluation is recommended. However, leader self-assessments could present further complications as a leader may evaluate his/her own integrity, authentic leadership and moral intelligence in a subjective and biased manner. Peer ratings could thus be considered. Single source bias can increase the estimated beta weights artificially, thus to obtain congruence between self and follower assessments multi-source data can be utilised (Avey, Wernsing & Palanski, 2012).

The third limitation concerns the sample pool from which the conclusions of this study were drawn. The study only managed to collect data from uniformed members of the SANDF based

in Pretoria. Future studies should focus on collecting data from all nine provinces of South Africa with the inclusion of civilian employees of the SANDF formally referred to as Public Service Act Personnel (PSAP). In addition, data collection could be extended to other defence forces throughout Africa and internationally. Results of such future studies could bring more insight into literature by verifying similarities or differences regarding relationships between the researched variables.

The fourth limitation concerns the sampling method utilised in this study. The non-probability sampling method that was utilised may have reduced the ability to draw general conclusions regarding the study results sufficiently. Because of the bureaucratic nature of the SANDF, the researcher was not in control of the military units, as well as the number of participants who availed themselves with the units for data collection. It is recommended that future research should avoid making use of convenient sampling to rather make use of a sampling method that is based on greater probability and randomness. This will ensure that the sample provides acceptable representativeness of the general SANDF population.

The fifth limitation concerns the data collection method. The study initially was aimed at collecting data by making use of a paper-and-pen/pencil questionnaire as well as an online questionnaire. Due to challenges experienced in obtaining clearance for collecting data from military units with internet access, however, only the paper-and pen/pencil questionnaires were utilised. It is recommended that future studies should aim at utilising a variety of data collection methods such as paper-and-pencil/pen questionnaires, online questionnaires, surveys, interviews, direct observation and reports.

The constructs in this study captured the core elements of relationships between leaders and followers and how these can influence OCB and associated behaviours. The study represents an attempt to explain specific relationships between these variables in order to gain better understanding of this complex network. Although these constructs are widely defined and researched, it is impossible to determine their exact scope of impact, which presents the sixth limitation. Future studies should explore other mediating and moderating variables to clarify the relationship between integrity, moral intelligence, authentic leadership and OCB (e.g. job satisfaction, organisational trust, team cohesion, commitment, positive organisational culture, open organisation communication structures).

It may be possible that the structural model excluded other significant constructs when investigating what influences OCB. The purpose of this study was not to tire out the nomological network of OCB; however, the focus was restricted to the important constructs of integrity, moral intelligence, authentic leadership and OCB. These constructs represent the core elements of the research that was undertaken. It is possible that other variables that influence OCB which were not investigated in this study exist. Such variables may comprise something that could be built on in future research. This presents limitation number seven.

The last and final limitation that has been identified concerns the statistical procedure that was followed. Several recommendations regarding the methodology that should be used in future studies are possible. In this study, CFA was performed on separate scales as well as on the entire dataset. It is recommended that, in order to cross validate the results, future studies should empirically test the structural model on another sample to determine whether the structural model also fits a second dataset. It is also suggested that a longitudinal study of the proposed conceptual model be undertaken to facilitate more convincing causal inferences.

5.9 MANAGERIAL IMPLICATIONS

This study focused on the fundamental elements of the relationships between leaders and their followers, as well as on the important impact that leaders and organisational characteristics have on employee behaviour. This study was motivated, furthermore, by the growing number of morally disappointing leaders throughout the world and in South Africa specifically. Morally disappointing leaders lack integrity and authenticity; as such their behaviour affects subordinates and the organisation negatively. Hence it is important to introduce interventions to address this growing concern.

In addition, authentic leaders have high moral character, integrity and positive psychological capacities; as such employees find them inspirational and motivating. Because these leaders are genuine and true to themselves, their followers tend to display genuine admiration for them to such an extent that they model their behaviour. It is therefore clear that authentic leaders affect the behaviour of their subordinates positively (Rego et al., 2012; Walumbwa et al., 2008; Walumbwa et al., 2010). Based on the positive effect of authentic leadership, it is thus recommended that leaders receive training on morally based leadership behaviour.

Authentic leaders have been found to inspire positive employee behaviours like productivity, organisational commitment, honesty, teamwork and OCB (Podsakoff et al., 1990). It is therefore recommended that managers employ interventions to promote positive employee conducts like OCB. OCB involves voluntary helpful behaviour performed by employees. Such behaviour is neither rewarded nor expected, but is noted as behaviour that contributes immensely in the positive advancement and daily operation of organisations. OCB may be directed at individuals (OCB-I) or towards the organisation (OCB-O) (Chowdhury, 2015; Chun et al., 2013; Peus et al., 2012; Williams & Anderson, 1991). Thus, to motivate the development of OCB in organisations it is recommended that managers encourage and foster a culture of voluntary helpfulness. Interventions for the development and implementation of OCB should be aimed at individual and organisational level.

In the light of the results of this study, employees are more likely to engage in OCB when led by an authentic leader who is highly characterised by the values of integrity and morality. Management therefore could implement a number of interventions to encourage and strengthen OCB in organisations. Practical approaches that may be implemented to encourage OCB may include rewards, verbal and written encouragement, acknowledgement, and gratitude by members of the organisation. Managers can also encourage employees to learn about one another's jobs. This will be advantageous when employees help each other, as they will have knowledge of the specific process and procedure to be followed when helping a colleague with his/her job. Management could also implement and promote an appealing vision that encourages openness, morality and helpfulness.

This study confirmed that the values of integrity and morality expressed by moral leaders (like authentic leaders) are of paramount importance for organisations and have an enormous influence on employee behaviour, which consequently affects organisational effectiveness. In support of this, Ciulla (1995) is of the opinion that it is insignificant for a leader to be successful when lacking in morals, hence the importance for leaders to uphold ethical codes and moral values as a guideline in their leadership roles. Effective leaders are mostly guided by principles of honesty, morality, justice and integrity; as a result, morality in leadership is viewed as an important indicator and predictor of effective leadership that has the potential to influence positive employee behaviours such as OCB.

5.10 CONCLUSION

The data obtained from the sample and the results from the statistical analyses were presented in Chapter 4. Chapter 5 was aimed at interpreting the results and offer possible explanations. Significant positive relationships were found to exist between integrity and moral intelligence, and between authentic leadership and OCB. In addition, a positive relationship was also confirmed between moral intelligence and authentic leadership.

These results contribute meaningful learning to existing literature by providing insights into the strength and directions of relationships among these particular constructs. In practice, it offers useful insight regarding the managerial implications for work organisations and the possible interventions that can be developed to promote integrity, moral intelligence, authentic leadership and OCB.

Over the years, organisations have continued to recognise the importance of employees' engagement in OCB. However, OCB will not automatically lead to organisational success. Therefore, it is important to know and understand how organisations can promote OCB. Organisations thus are encouraged to take full responsibility for ensuring that authentic leaders drive management practices and that leader integrity is developed through the presence of morally based business practices. By strengthening these factors, OCB will be encouraged amongst employees due to the inspiration instilled by moral leaders.

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APPENDIX A: INFORMED CONSENT FORM

UNIVERSITEIT•STELLENBOSCH•UNIVERSITY
jou kennisvennoot • your knowledge partner

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Research title: The influence of integrity and moral intelligence on authentic leadership and organisational citizenship behaviour.

You are hereby requested to please take part in a research study conducted by Refeloe Matsimbe (MCom Psych Masters), from the Department of Industrial Psychology at Stellenbosch University. The results obtained will contribute to the completion of a Masters of Commerce degree in Industrial Psychology. The results of the study will also contribute to the completion of the thesis component of this postgraduate programme. You were selected as a possible participant in this study because you are in a non-managerial role in the South African National Defence Force (SANDF), which is a requirement for this study and you can therefore give valuable input to the data gathering process of this study.

1. PURPOSE OF THE STUDY

The aim of the study is to investigate hypothesized relationships between constructs that are expected to significantly affect the occurrence of Organisational Citizenship Behaviour (OCB). These constructs include integrity, moral intelligence and authentic leadership and the affect these will have on OCB.

2. PROCEDURES

If you volunteer to participate in this study, you will be asked to evaluate your leader's perceived integrity, level of moral intelligence and authentic leadership. Additionally, you will evaluate the extent to which you engage in acts of organisational citizenship behaviour in your work environment.

You will perform this by completing one questionnaire comprising different measures for each construct. There is no right or wrong responses; we are merely interested in your personal opinion. The completion of the questionnaires will be done at a central venue as determined by the officer commanding of your unit.

The questionnaire will require approximately 30 to 45 minutes of your time.

3. POTENTIAL RISKS AND DISCOMFORTS

There are no potential risks envisaged in this study. The only foreseen discomfort is the time that you will have to set aside to complete the questionnaire.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

This study will provide the psychology profession and other professions invaluable information regarding the importance of developing ethically based leadership styles, like authentic leadership. This study will also re-emphasize the significance of having morally driven leaders that value the importance of integrity. Furthermore it will highlight the strong effect of authentic leadership in eliciting positive organisational outcomes. Consequently this will help organisations and the psychology discipline to better understand how factors such as integrity, authenticity and morality enhance the presence of OCB in an organisation. If the study yields significant relationships, the integrity scale used can be validated and later certified as an integrity test in organisations in South Africa. This test can help ensure that the right incumbents are selected and recruited and that prospective applicants who could engage in OCB can be identified prior to entering the work organisation.

Feedback on the results of the survey will be provided to the SANDF. The results can be an indication of whether the need exists to develop interventions and training programmes in terms of these constructs.

5. PAYMENT FOR PARTICIPATION

Kindly note that payment will not be made to you as a participant, for taking part in this study.

6. CONFIDENTIALITY

The questionnaire will be completed anonymously. The researcher will not be able to trace your identity from the data. Neither will the researcher be able to trace the identity of your leader from the data. The identity of your unit will not be revealed in any publication.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a coding procedure. The results of this study will be published in the form of a completed thesis but confidentiality will be maintained at all times.

Only the researcher and supervisor will have access to the data.

Only aggregate feedback on the overall results of the study will be given to the SANDF. No results of any individual respondent or any leader rated by a respondent will be made available to the organisation and confidentiality of participants will be kept at all times.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions

you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Refeloe Matsimbe (refeloematsimbe@yahoo.com/ +27 12 482 2340) or Professor A.S. Engelbrecht (ase@sun.ac.za /+27 21 808 3003).

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development, Stellenbosch University].

CONSENT

☐ 1. I hereby confirm that I have read and understood the information provided above and voluntarily consent to participate in this study under the stipulated conditions.

☐ 2. I hereby confirm that I have read and understood the information provided above but that I decline the invitation to participate in this study.